Population Survey of the Oyster *Crassostrea virginica* in the Dunk River Estuary, Prince Edward Island, 1969 and 1970

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B3J 2S7

October 1985

Canadian Manuscript Report of
Fisheries and Aquatic Sciences
No. 1857

86-1373/

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Canadian Manuscript Report of
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by

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Cat. No. Fs 97-4/1857E ISSN 0706-6473

Correct citation for this publication:

Hawkins, C.M. and T.W. Rowell. 1985. Population survey of the oyster Crassostrea virginica in the Dunk River Estuary, Prince Edward Island, 1969 and 1970. Can. MS Rep. Fish. Aquat. Sci. 1857: iv + 107 p.

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ABSTRACT

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This report is the first in a series of seven which examines temporal changes in the oyster population of the Dunk River Estuary, Prince Edward Island. The report tabularizes and graphically presents information on the distribution, abundance, size, and age composition of oysters collected in 1969 and 1970. In 1969, oyster density over the survey area ranged from 0-228 m^2. Fifty-one percent of the sampling stations yielded oysters, 2 yr olds representing 56.2% of the population, being most abundant. One year olds represented only 13.4% of the 1969 population. In 1970, when only the area of greatest fishing activity was surveyed, oyster density ranged from 23-210 m^2, with 1 yr old oysters representing 44.9% of the population and 2 yr olds 15.8%. Size frequency histograms for individual stations indicated that, in both 1969 and 1970, spatfall settlement and survival were more regular in the principal fishing areas than in other areas of the Estuary.

RÉSUMÉ

Hawkins, C.M. and T.W. Rowell. 1985. Population survey of the oyster Crassostrea virginica in the Dunk River Estuary, Prince Edward Island, 1969 and 1970. Can. MS Rep. Fish. Aquat. Sci. 1857: iv + 107 p.

Le présent document est le premier d'une série de sept rapports portant sur les changements temporels qui touchent la population d'huîtres de l'estuaire de la riviére Dunk, Ille-du-Prince-Edouard. Le rapport présente des renseignements sous forme de tableaux et de graphiques concernant la distribution, l'abondance, la taille et l'âge des huîtres capturées en 1969 et 1970. En 1969, la densité des huîtres dans la zone étudiée a varié de 0 à 228 par m^2. On a capturé des huîtres dans 51% des stations d'échantillonnage; les huîtres âgées de deux ans, qui représéntaient 56,2% de la population, étaient les plus abondantes. Les huîtres âgées d'un an ne représentaient que 13,4% de la population en 1969. En 1970, année où seule la région présentant la plus forte activité de pêche a été étudiée, la densité des huîtres a varié de 23 à 210 par m^2; les huîtres âgées de un et deux ans représentaient respectivement 44,9% et 15,8% de la population. Les histogrammes de fréquences relatifs à la taille pour les différentes stations ont indiqué qu'en 1969 et 1970, la fixation des larves sur un support et la survie ont été plus régulières dans les principales zones de pêche que dans les autres zones de l'estuaire.

INTRODUCTION

The quality and production of the American oyster, Crassostrea virginica, from the Dunk River Estuary, Prince Edward Island, is among the highest of all areas in the Maritime provinces. The area is extensively exploited in a "spring" relay fishery in which licensed fishermen harvest oysters which are marginally bacterially contaminated. In the spring fishery, oysters greater than 2.5 inches (6.4 cm) in length are relaid to oyster leases for cleansing prior to the fall leasehold and market fishery. The fishery in the Dunk River, along with a much smaller fishery in the adjoining Wilmot River, has consistently produced roughly 50% of Prince Edward Island's market production (Rowell 1975). Because of the great importance of the area in supplying oysters to the leasehold fishery, a survey was designed to assess the oyster population structure and possible means of enhancing production. The program, initiated in August 1969, provided detailed information on the distribution, abundance, and size composition of oysters in the Estuary. The data presented here, while previously used in planning enhancement activities, have not been generally available to more recent researchers. The purpose of this report, and those to follow, is to summarize the information collected as a basis for examining temporal changes in the oyster population. This report, covering the 1969 and 1970 surveys, is the first of seven spanning the years 1969 to 1977.

MATERIALS AND METHODS

In August 1969, the field sampling program was carried out after the seasonal close of the relay fishery. The general area of survey was first outlined on a hydrographic chart. Fourteen transect lines across the Estuary were then established visually from the survey boat using the available landmarks on each shore. Based on previous knowledge of oyster distribution, the topography of the Estuary, and useable landmarks, transects were established at roughly 200 m intervals along the Estuary. Proceeding along each transect, a diver determined the point at which oysters were first encountered. At this point the diver was joined by the accompanying surface craft, the coordinates between known landmarks taken with a sextant, and the position immediately plotted using a three-arm protractor. To randomly select an area of bottom for sampling, a 1.0 m^2 quadrat was thrown into the water several meters from the boat. The diver then swam around the quadrat to gain a visual estimate of bottom conditions and oyster density in the area proximal to it. These observations were reported immediately to the recorder in the boat. The diver then collected all surface material within the quadrat to a depth of approximately 13 cm (5 inches), and placed it in a numbered, fine-mesh bag. On completion of each station, the support craft moved approximately 100-150 m along the same transect line to the next station where the sampling procedure was repeated. Based on general knowledge of the local oyster distribution, bottom characteristics, and diver observations, sampling stations were sometimes spaced at lesser or greater distances, the range being 50-300 m. A total of 110 stations were sampled. The total area under investigation was approximately 300 ha. It was bounded on the north end by a line from Hurd Point across the Estuary to Oyster Point and at the southeast end by the mouth of the South Arm of the Dunk River (south shore) to Murray Island on the north shore. Figure 1 shows the position of the 14 transects and their respective sampling stations in the Dunk River Estuary.

Samples were cleaned of excess mud and silt by shaking the sample bag in sea water. On shore, the samples were held in sea water until sorted. In the laboratory, the samples were sorted and weighed by the following categories: 1) total shell and live invertebrates (approximate total sample weight); 2) oyster shell; 3) other shell; 4) live oysters; and 5) live other invertebrates. All weights were expressed in grams. No attempt was made to dry the samples or remove excess surface water prior to weighing. All live oysters were measured along the longest axis to the nearest 0.5 cm with calipers. After measuring, each individual was classified into 0.5 cm size classes ranging from 0.5-20.0 cm.

Although oysters were not aged at the time of sampling, we have been able to partition 1, 2, 3, and 4 yr old and older oysters into size classes through the application of a von Bertalanffy growth equation established by Lavoie and Bryan (1981) for oysters from the same estuary.

In 1970, the field sampling program was carried out at the end of July. Selection of sampling stations, as well as materials and methods used in data collection, follow those presented above. In 1970, however, a series of transect lines were not set; specific station positions were selected in their place in the area where the bulk of harvesting was seen to take place. Consequently, the sample area was most representative for determining characteristics of the oyster population left after harvest. No detailed record was kept of the associated biota and substrate composition of the samples taken at each station. Total fresh weight of oysters and individual size (in centimeters) were the only measurements recorded from the material collected within each square meter sample.

RESULTS AND DISCUSSION

1969 POPULATION SURVEY

The stations sampled along each transect line are shown in Table 1, along with oyster density and weight per square meter, size range, mean size (in centimeters), and standard deviation. The density of oyster shell collected at each station is shown in Figure 2. Weight of oyster shell at each station ranged from 0-3.6 kg m^{-2}. Oyster density for each station where live oysters were found is shown in Figure 3. Over all stations examined, the density of oysters ranged from 0 to a maximum of 228 individuals m^{-2} with a total overall measured size range of 1.0-16.5 cm. Forty-nine percent of the stations yielded no live oysters. All transects except M (Stations 100, 101, 102, and 103) had oysters.

Lavoie (1977) arbitrarily classified oysters in Caraquet Bay, New Brunswick, into three categories: low density - areas characterized by densities of ≤10 oysters m^{-2}, intermediate density - areas with densities of 11-100 oysters m^{-2}, and high density - areas having densities greater than >100 oysters m^{-2}. Based on these three density categories, 66.4% of the 110 stations sampled in 1969 exhibited low densities, 25.5% intermediate, and 8.1% high densities. Lavoie indicates that areas of intermediate oyster density are preferred by fishermen, since they yield good-quality oysters while requiring little culling effort. While this consideration may be significant in a market-direct fishery, it does not apply to the same degree in a relay fishery, such as that in the Dunk River, where the cull size is

smaller. Density information based on size (length) and age is more useful in determining oyster availability to the fishery and in following recruitment patterns.

Figures 4a, b, c, and d show the numerical density and distribution of 1, 2, 3, and 4+ yr old oysters respectively. Figures 5a, b, c, and d express the same data as a percentage of the total number of individuals collected at each station. About 8% (237 individuals) of the total number of oysters collected in the survey (2,924) were greater than or equal to 2.5 inches (6.5 cm), the effective cull size for the relay fishery, while about 6% (164 individuals) were equal to or greater than the market size of 3 inches (7.6 cm). Examination of Figure 5b indicates that 2 yr old oysters comprise over 50% of the oysters collected in 30.9% of the stations examined and 56.2% of the total population, suggesting that the 1967 spat settlement and survival of that year class were good. Oysters 1 yr old, from the 1968 year class, were poorly represented.

Histograms showing the size distribution at each station with more than 10 individuals m^2 are presented in Figure 6. Lower densities were not considered representative of populations within a square meter quadrat. Size frequency distributions for individual stations within the two principal fishing areas suggest that these areas receive more regular spatfall settlement and probably have better rates of survival than do other areas within the Estuary. This is indicated by the wide size range of oysters collected at each station in each of the two areas (Stations 20, 21, 106, 107, and 43-49) combined with similar patterns in the overall size frequency distribution among stations within each area. Areas outside the main fishing regions exhibit irregular patterns in both the overall size frequency distributions among stations and the range of sizes of oysters at each station.

Examination of Figure 7, a composite size frequency histogram constructed from all available data, provides a means of comparing the 1969 population size structure with those observed in subsequent years. The population size structure in 1969 shows a unimodal distribution pattern. The mode is quite discrete, spanning only 2.5 cm (2.5-5.0 cm). There are few small or large individuals - oysters less than 2 cm or greater than 6.5 cm. The low number of smaller individuals may reflect either sampling error or poor settlement and survival of the 1968 spat set. Since the sampling technique leaves little room for sampling error, poor settlement and spat survival are the likely causes. The low numbers of larger oysters reflect the combined effects of natural mortality and fishery removals. Fishery removals are probably the most significant since the cull size for the relay fishery is 6.5 cm. When compared to subsequent years (Hawkins and Rowell 1985a, b, c, d, e, and f), the 1969 population structure has some differences. For each year surveyed between 1970-1977, except 1973, at least two modes are prominent in the size frequency distributions. Additionally, the frequency value calculated for the single mode in 1969 is among the highest when compared to other years. The moderate impact of the 1968 spatfall may be the result of either a relatively poor spatfall or poor survivorship, or a combination of the two.

The wet weight of material collected at each station is given in the Appendix. Generally, the weight of oyster shell and live oysters constitute the major proportion of the total sample weight.

1970 POPULATION SURVEY

Figure 8 shows the positions of the 20 sampling stations in the central portion of the Estuary. Table 2 lists the oyster density and weight per square meter, size range, and mean size (in centimeters) of oysters sampled, and the standard deviation at each station. When all stations are considered, oyster size ranges from less than 0.5-17.0 cm with a mean size range from 2.67-4.96 cm. Oyster density per square meter for each station is shown in Figure 9. Oyster density ranged from 23-210 individuals m^{-2}. According to the density classification used by Lavoie (1977), the 1970 data indicate that 25% of the stations have intermediate densities (11-100 oysters m^{-2}), and 75% have high densities (>100 oysters m^{-2}). The percentage of stations with intermediate densities is similar to that determined in the 1969 population survey (25.5%), while the percentage of stations with high densities is markedly higher (75% in 1970 vs 8.1% in 1969).

Figures 10a, b, c, and d present the numerical density per square meter of 1, 2, 3, and 4 yr old oysters respectively. Figures 11a, b, c, and d express the same data as a percentage of the total number of individuals collected at each station. Approximately 16% (470 individuals) of the total number of oysters collected (2,924) were greater than or equal to 2.5 inches (6.5 cm), the cull size for the relay fishery, while about 5% (130 individuals) were equal to or greater than the market size of 3 inches (7.6 cm). Examination of Figure 11a indicates that 1 yr old oysters (to 2.5 cm) comprise greater than 25% of the oysters collected in 75% of the stations examined. In addition, 3 yr old oysters (4.6-6.5 cm) comprise greater than 25% of the oysters collected in 60% of the stations (Fig. 11c).

Size frequency histograms were also constructed for all stations (Fig. 12). As in 1969, the 1970 data reflect similar patterns in the frequency distribution of oysters collected at each station in the two principal fishing areas. This further illustrates the regular nature of spatfall settlement and recruitment success of oysters in these areas as found in 1969.

Examination of Figure 13, a size frequency distribution constructed from all station data, provides a means of comparing the 1970 population size structure with those of subsequent years. The 1970 length frequency structure is bimodal. Oysters 1 yr old (≤2.5 cm) comprise 45% and 3 yr old oysters (4.6-6.5 cm) 28% of the sampled population. The low numbers of 2 yr olds (2.6-4.5 cm) could reflect a moderate impact of the 1968 spatfall, resulting from either poor spatfall settlement or poor post-settlement survival, or a combination of both. When compared to 1969 and all subsequent years but 1973 (Hawkins and Rowell 1985a, b, c, d, e, and f) the 1970 population structure is similar in that two modes are dominant. The 1970 modal values are also among the highest observed.

SUMMARY

1. Weight of oyster shell per square meter collected at individual stations in 1969 ranged from 0-3.6 kg.

2. Oyster shell and live oysters comprised the major proportion of the total sample weight at each station in 1969.

3. Oyster density in 1969 ranged from 0-228 m^{-2} over all stations, 66.4% of the stations having low densities (<10 m^{-2}), 25.5% having intermediate densities (11-100 m^{-2}), and 8.1% having high densities (>100 m^{-2}).

4. In 1970, oyster density ranged from 23-210 m^{-2} over all stations, 25% of the stations having intermediate densities (11-100 m^{-2}) and 75% having high densities (>100 m^{-2}).

5. Oysters 2 yr old (2.6-4.5 cm) comprised over 50% of the oysters collected in 30.9% of all stations examined in 1969.

6. In 1970, 1 yr old oysters (≤2.5 cm) comprised over 25% of the oysters collected in 75% of all stations, and 3 yr old oysters (4.6-6.5 cm) comprised over 25% of the oysters collected in 60% of the stations examined.

7. Size frequency distributions in both 1969 and 1970 indicate that spatfall settlement and survival is more regular in the principal fishing areas than in other areas of the Estuary.

8. The size frequency distribution for 1969 indicates that 1 yr old oysters comprised 13.4%, 2 yr olds 56.2%, and 3 yr olds 21.4% of the population. In 1970, 1 yr old oysters comprised 44.9%, 2 yr olds 15.8%, and 3 yr old oysters 28.2% of the total sampled population.

ACKNOWLEDGEMENTS

We wish to thank C.F. Bryan, R. Swain, and P. Woo for their assistance in collecting and processing the field samples. B. Mullen and D. Whillans aided in data processing and graphic presentation.

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Table 1. Density per square meter, range of 0.5 cm size classes, mean size, (in centimeters), standard deviation, and fresh weight (in kilograms) of oysters collected at each station in 1969.

Transect line	Station number	Number m^{-2}	Range of 0.5 cm size classes	Mean size (cm)	Standard deviation	Oyster weight (kg m^{-2})
A	1	1	11.5-12.0	11.5		0.10
	2	2	9.5-10.0	9.5	0	0.23
	3	0				
	4	0				
	5	1	10.5-11.0	10.5		0.15
	6	0				
	7	0				
	8	0				
	18*	0				
B	9	0				
	10	4	2.0-12.5	6.5	4.4	0.27
	11	3	2.0- 9.0	4.2	3.8	0.11
	12	0				
	13	0				
	14	0				
	15	0				
	16	0				
	17	0				
C	19	0				
	20	65	1.0- 8.5	3.5	1.6	0.69
	21	97	1.0-11.5	3.3	1.9	0.87
	22	0				
	23	0				
	24	0				
	25	0				
	26	0				
	27	1	10.5-11.5	10.5		0.18
	28	0				
D	29	0				
	30	0				
	31	3	2.0- 3.0	2.3	0.3	0.02
	32	6	2.0-14.0	5.5	4.5	0.30
	33	42	1.0-13.0	3.4	2.2	0.64
	34	77	1.5- 7.5	2.9	1.0	0.39
	35	4	2.5-14.0	5.8	5.2	0.18
	36	104	1.0-10.0	3.5	1.9	1.67
	37	1	10.0-10.5	10.0		0.14
	38	2	3.0- 5.0	3.8	1.1	0.02
	39	25	1.5- 7.0	3.6	1.1	0.25
	40	85	1.0- 8.0	3.0	1.2	0.63
	41	0				

Supplemental station sampled after completion of Transect B.

...Cont'd.

Table 1. Cont'd.

Transect line	Station number	Number m^{-2}	Range of 0.5 cm size classes	Mean size (cm)	Standard deviation	Oyster weight (kg m^{-2})
E	42	51	1.0- 8.5	3.7	1.4	0.47
	43	146	1.5-11.0	3.8	1.6	1.83
	44	0				
	45	74	1.5- 8.0	3.4	1.1	0.67
	46	169	1.0-10.0	3.7	1.6	0.57
	47	144	1.0- 9.5	3.6	1.8	1.67
	48	152	1.0-10.5	3.6	1.9	1.42
	49	91	1.0- 6.0	3.3	1.1	0.48
	50	59	1.5- 8.0	3.5	1.3	0.51
	51	3	2.5- 9.5	4.8	3.6	0.09
	52	0				
	53	0				
F	54	4	1.5- 5.5	3.1	1.7	0.02
	55	1	4.0- 4.5	4.0		0.01
	56	1	4.0- 4.5	4.0		0.01
	57	101	1.0- 8.5	3.5	1.2	0.75
	58	34	1.5- 8.5	3.9	1.5	0.22
	59	37	1.5- 5.5	3.7	2.1	0.39
	60	13	3.0- 5.5	4.0	0.9	0.10
	61	25	1.5- 7.5	3.7	1.3	0.25
	62	19	2.5-13.5	5.2	2.9	0.35
	63	0				
	64	23	2.5-11.5	4.5	1.8	0.04
G	65	0				
	66	55	1.5-16.5	4.7	2.7	0.78
	67	12	2.5-10.5	5.7	2.6	0.30
	68	41	1.5-10.5	5.0	2.0	0.77
	69	9	2.5- 6.5	3.6	1.4	0.08
	70	40	2.0-15.0	4.4	2.7	0.58
	71	188	1.0-12.5	4.2	1.8	1.93
	72	84	1.5-11.0	4.5	1.7	0.96
H	73	2	3.5- 4.5	3.8	1.1	0.02
	74	19	2.0-12.5	3.9	2.6	0.25
	75	38	2.0- 7.5	4.0	1.2	0.36
	76	100	2.0-10.5	4.5	1.9	1.36
	77	0				
	78	0				

...Cont'd.

Table 1. Cont'd.

Transect line	Station number	Number m^{-2}	Range of 0.4 cm size classes	Mean size (cm)	Standard deviation	Oyster weight (kg m^{-2})
I	79	4	4.0- 6.0	4.8	0.7	0.05
	80	5	3.5- 4.5	4.1	0.4	0.04
	81	0				
	82	0				
	83	28	2.5- 6.5	4.7	1.0	0.28
	84	5	4.0-11.0	5.8	3.1	0.22
	85	1	4.0- 4.5	4.0		
	86	0				
J	87	0				
	88	0				
	89	0				
	90	12	2.5- 7.5	4.3	1.3	0.12
	91	1	5.0- 5.5	5.0		0.01
	92	0				
K	93	9	4.5-14.5	7.7	4.3	0.62
	94	0				
	95	8	3.5- 9.5	4.8	2.0	0.16
L	96	9	2.5- 5.0	3.7	1.0	0.06
	97	32	2.0-11.0	4.5	1.9	0.51
	98	228	1.5- 8.5	3.8	1.4	1.77
	99	184	1.5- 8.5	4.4	1.4	1.81
M	100	0				
	101	0				
	102	0				
	103	0				
N	104	0				
	105	1	10.0-10.5	10.0		0.17
	106	98	1.0-11.0	3.6	1.9	1.27
	107	43	1.5-11.0	4.3	2.6	1.12
	108	0				
	109	0				
	110	0				

Table 2. Density per square meter), range of 0.5 cm size classes, mean size (in centimeters), and wet weight (in kilograms) of oysters collected at each station in 1970.

Station number	Number m^{-2}	Range of 0.5 cm size classes(cm)	Mean size	Standard deviation	Oyster weight ($kg\ m^{-2}$)
1	115	0.5-11.5	4.96	2.66	1.99
2	210	0.0-12.5	4.67	2.26	2.55
3	23	0.5- 8.5	4.02	2.18	0.26
4	118	0.5-10.5	3.57	1.88	1.09
5	241	0.0-10.5	3.53	2.19	2.23
6	126	0.5-10.0	4.00	2.07	1.59
7	335	0.0- 8.5	3.13	1.84	2.01
8	127	0.5-10.5	3.42	2.38	1.21
9	248	0.0- 8.5	3.60	2.15	2.11
10	110	0.5- 8.5	3.27	1.91	0.79
11	100	0.5-11.5	4.03	2.48	1.99
12	154	0.0- 8.5	3.70	2.04	1.38
13	73	0.5-10.5	4.56	2.39	0.94
14	29	0.0- 7.0	3.98	2.25	0.56
15	134	0.0-13.5	3.82	2.79	1.66
16	114	0.0-10.5	2.67	2.62	0.87
17	103	0.0- 9.5	4.27	2.39	1.23
18	144	0.0-17.0	4.27	2.30	1.86
19	97	0.5- 8.5	3.48	2.09	0.84
20	256	0.0-11.0	4.20	2.36	3.07

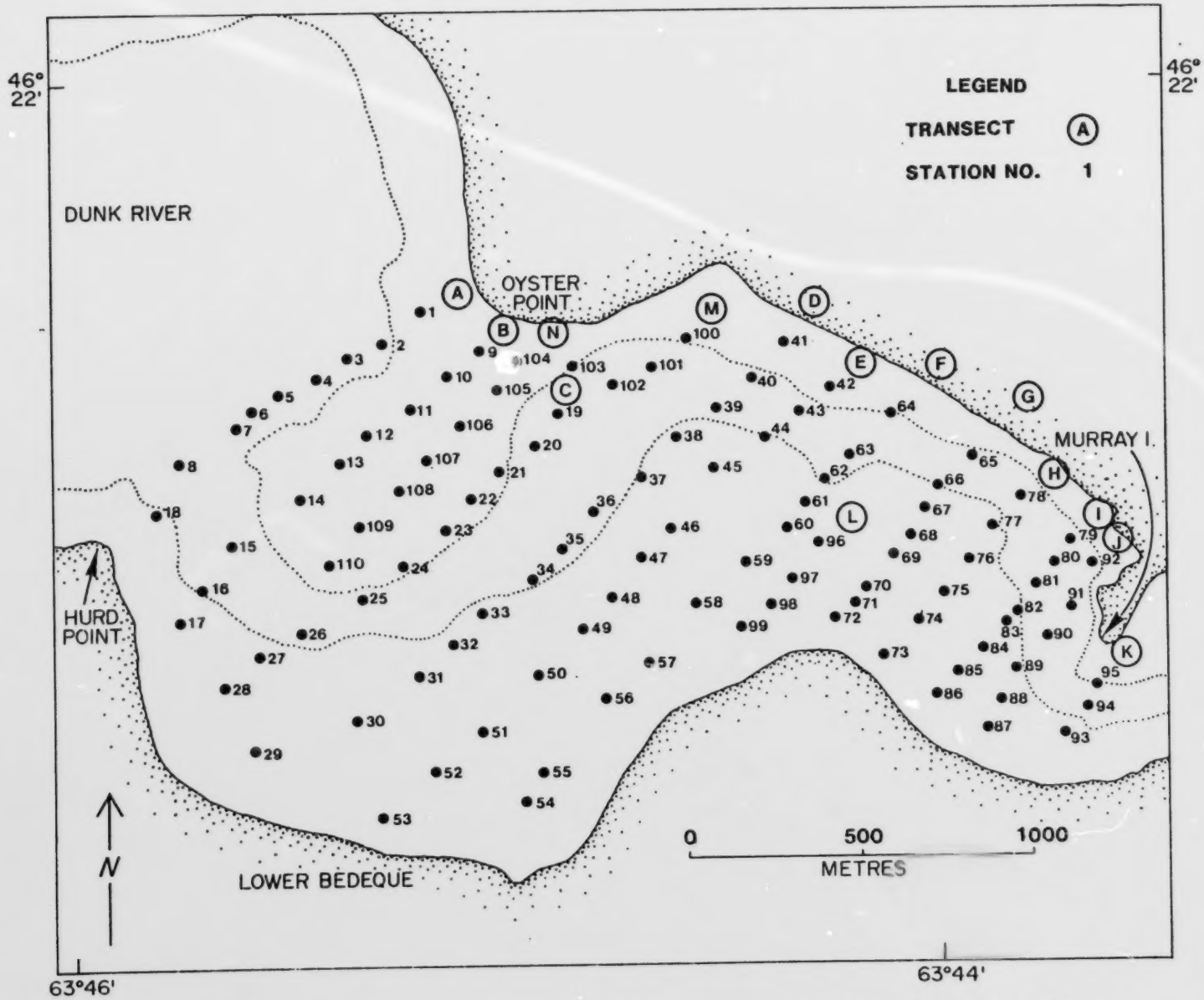


Figure 1. Positions of transects and their respective sampling stations in the Dunk River Estuary, 1969.

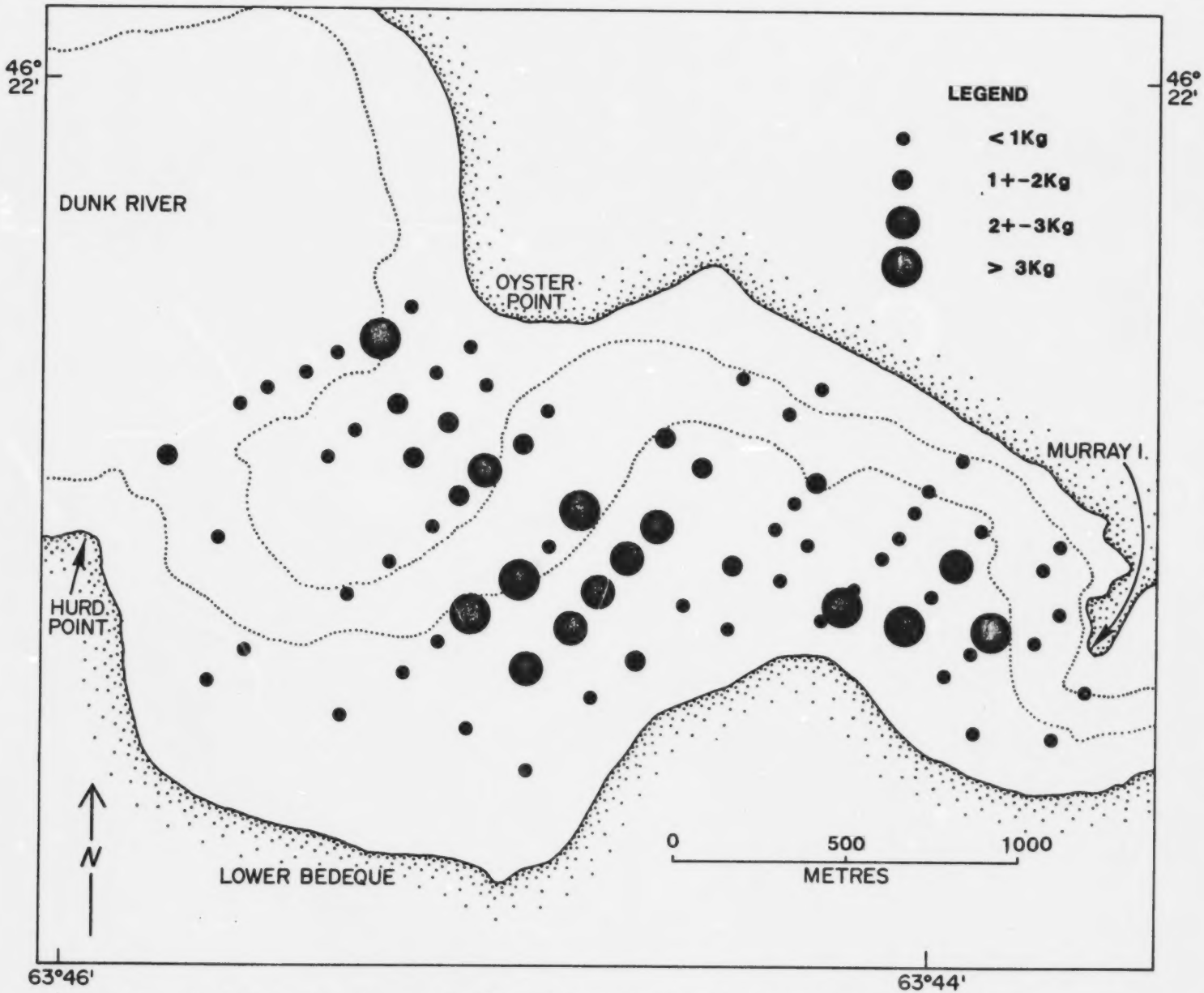


Figure 2. Weight of oyster shell collected at each station in 1969.

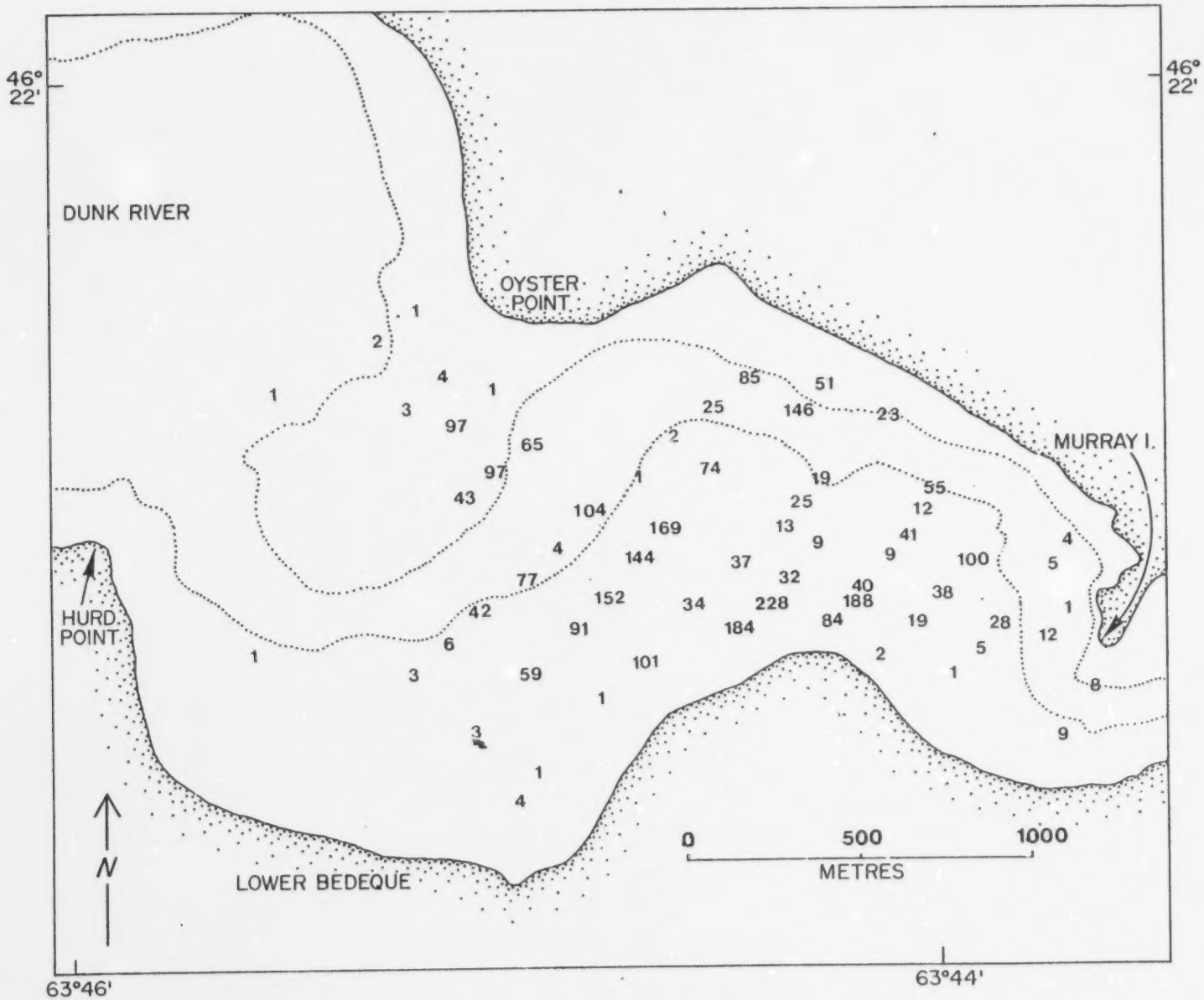


Figure 3. Number of oysters per square metre.

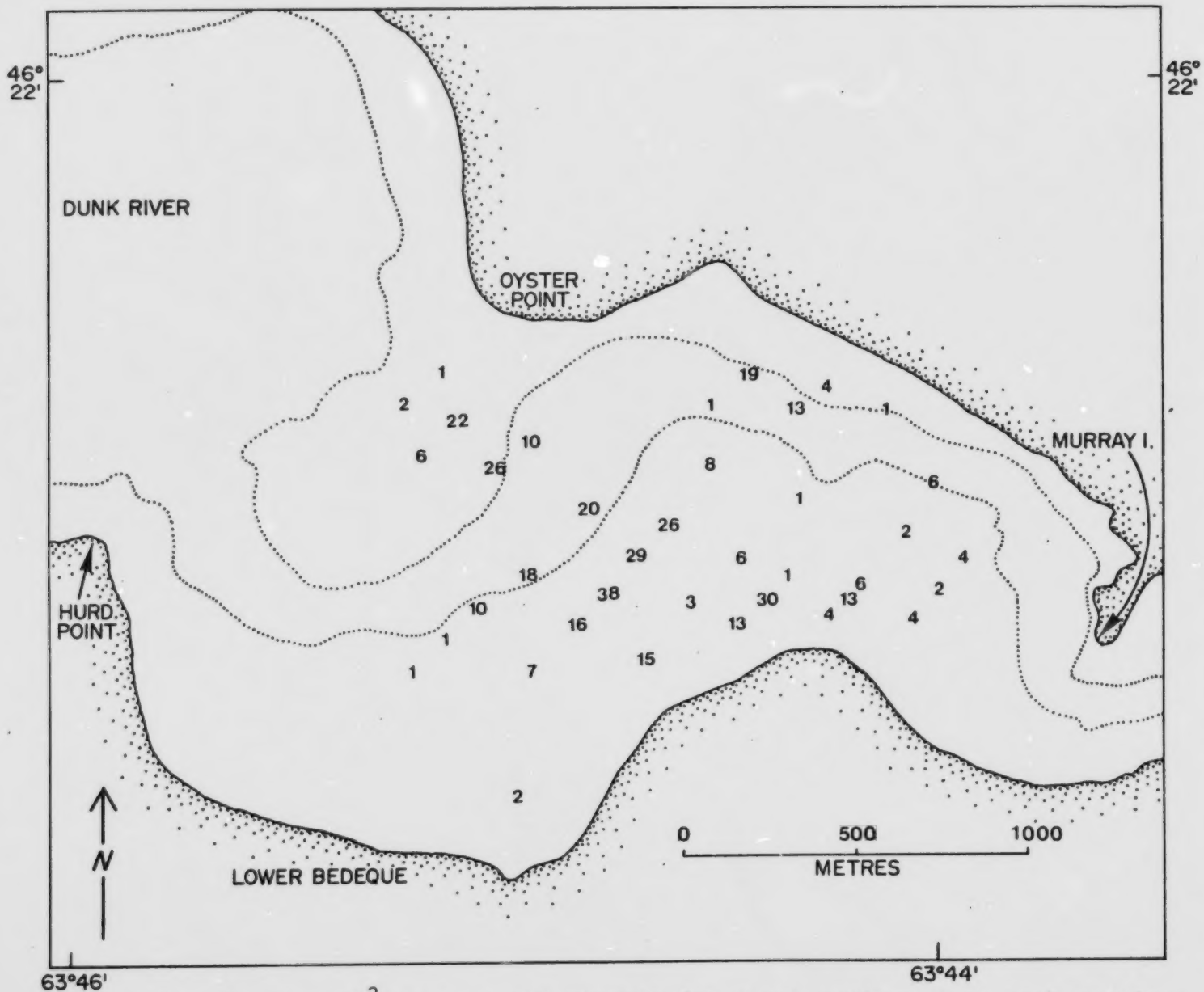


Figure 4a. Density m^{-2} of 1 yr old oysters ($\leq$2.5 cm) collected at each station.

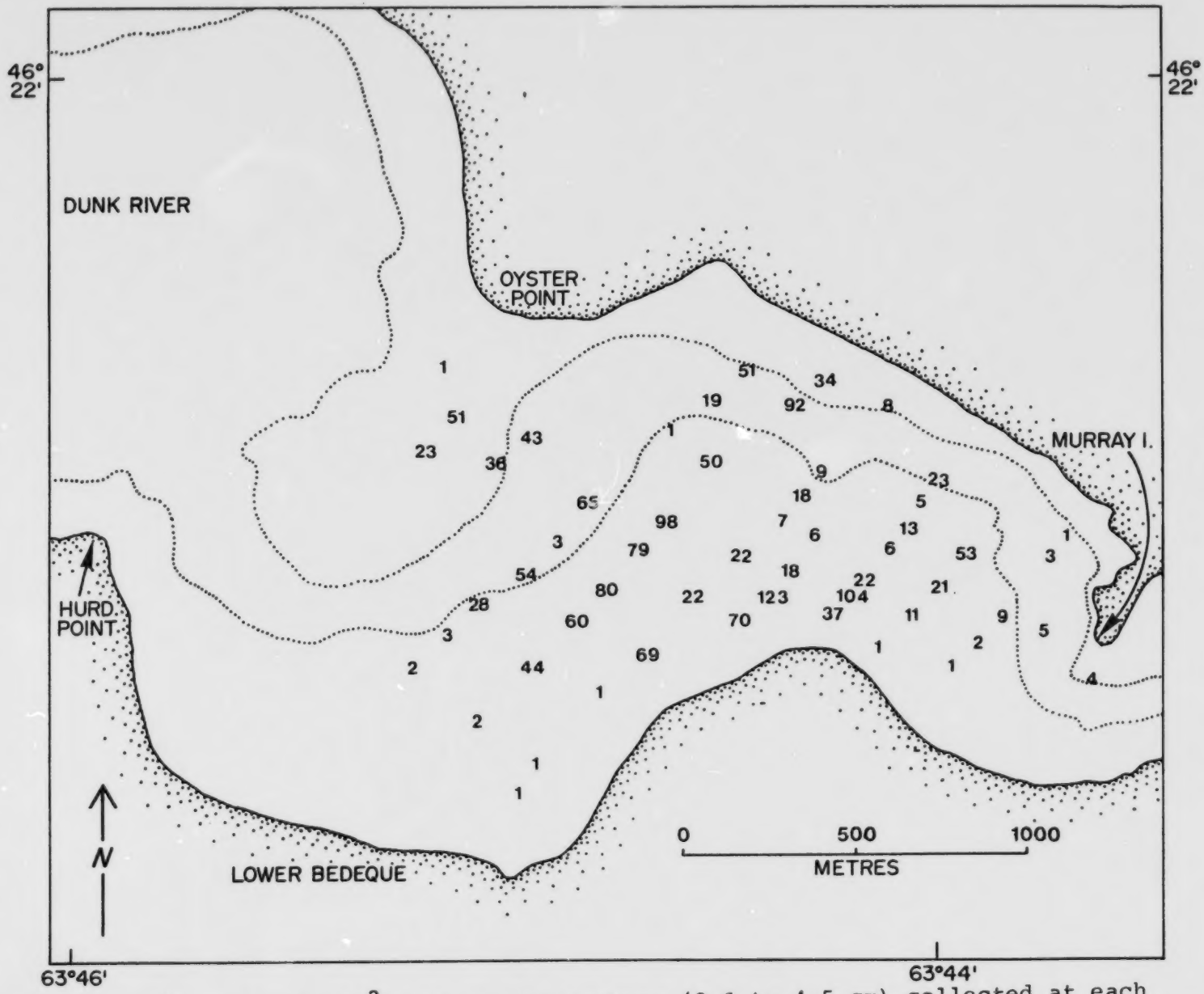


Figure 4b. Density m^{-2} of 2 yr old oysters (2.6 to 4.5 cm) collected at each station.

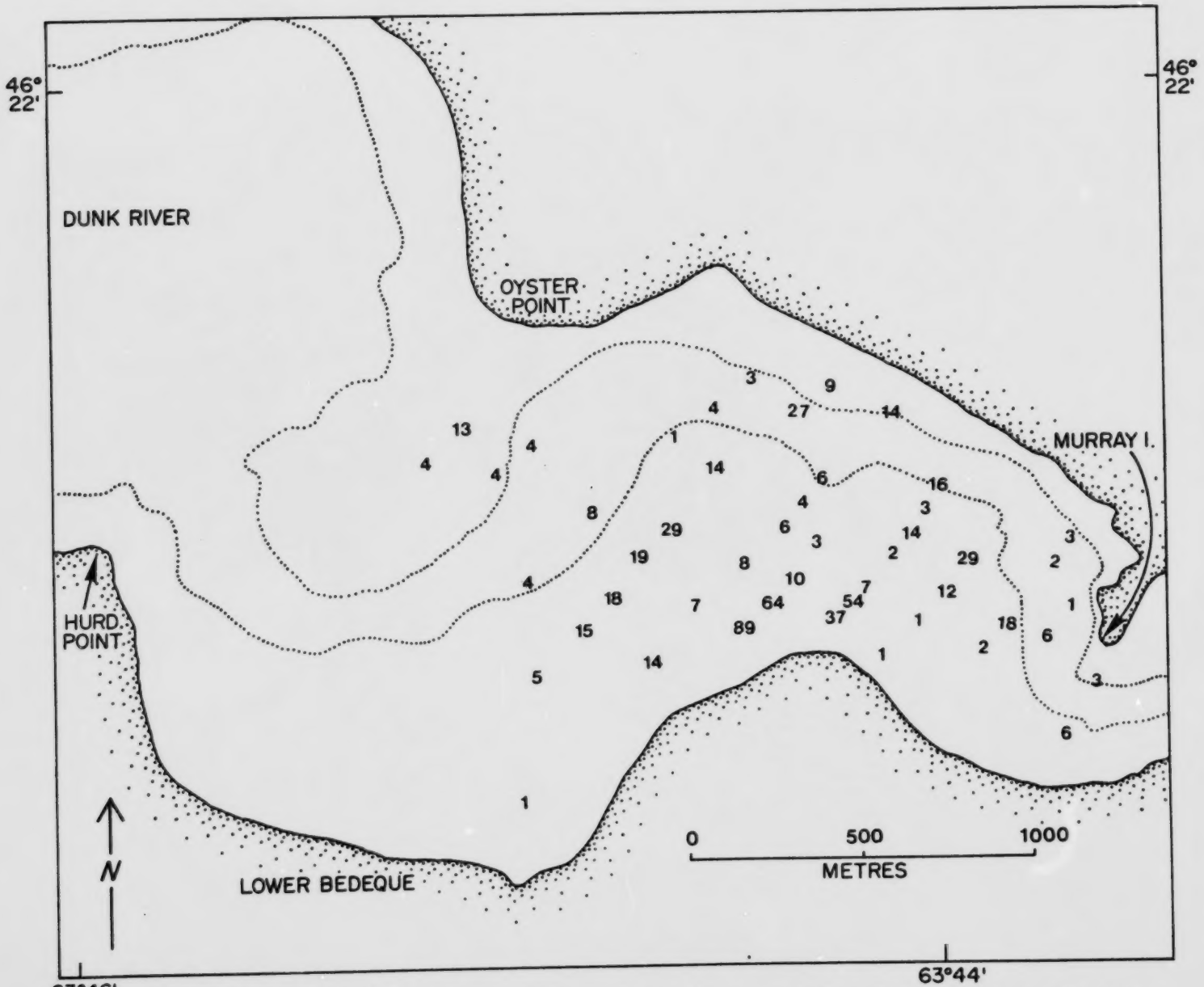


Figure 4c. Density m^{-2} of 3 yr old oysters (4.6 to 6.5 cm) collected at each station.

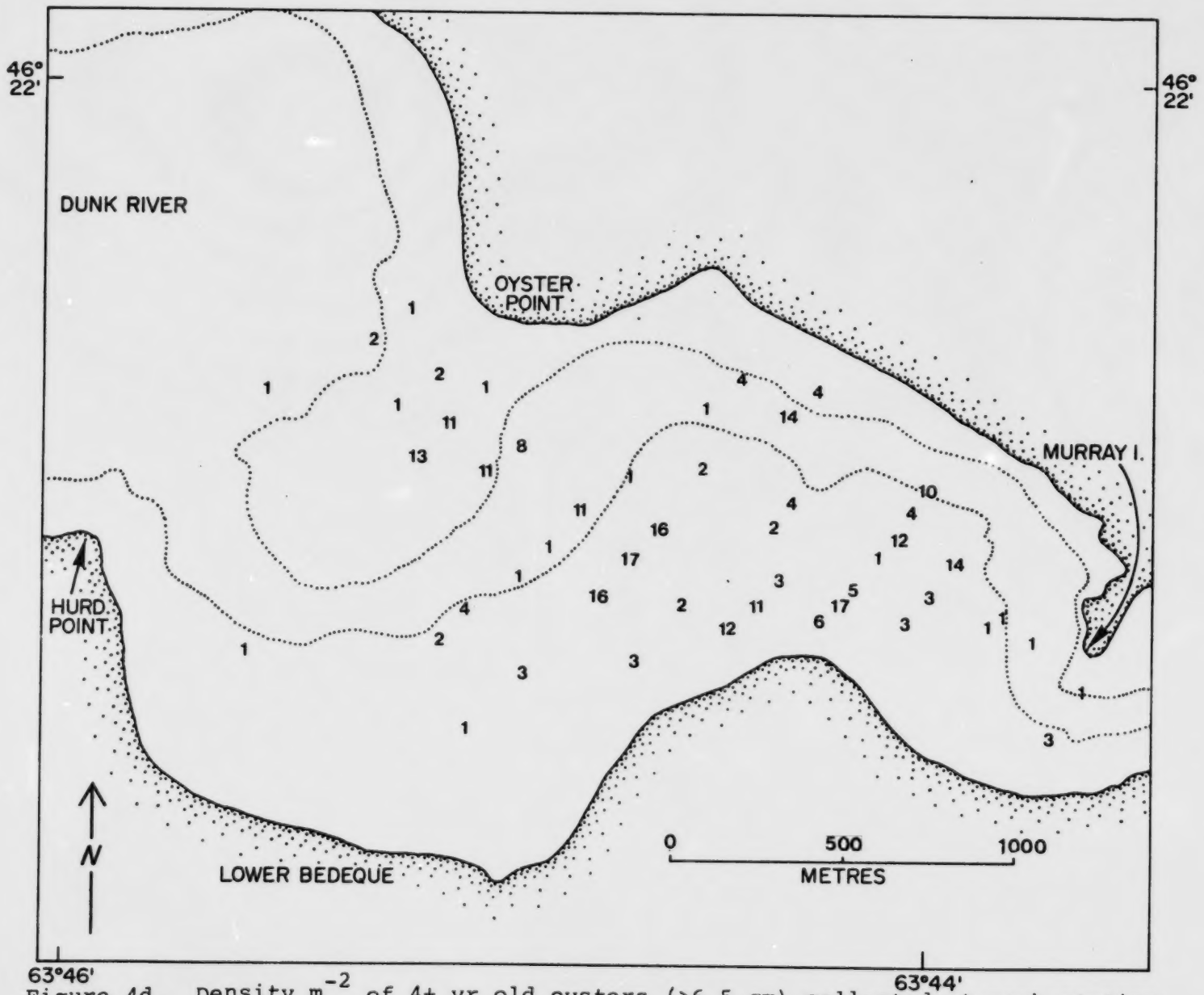


Figure 4d. Density m^{-2} of 4+ yr old oysters (>6.5 cm) collected at each station.

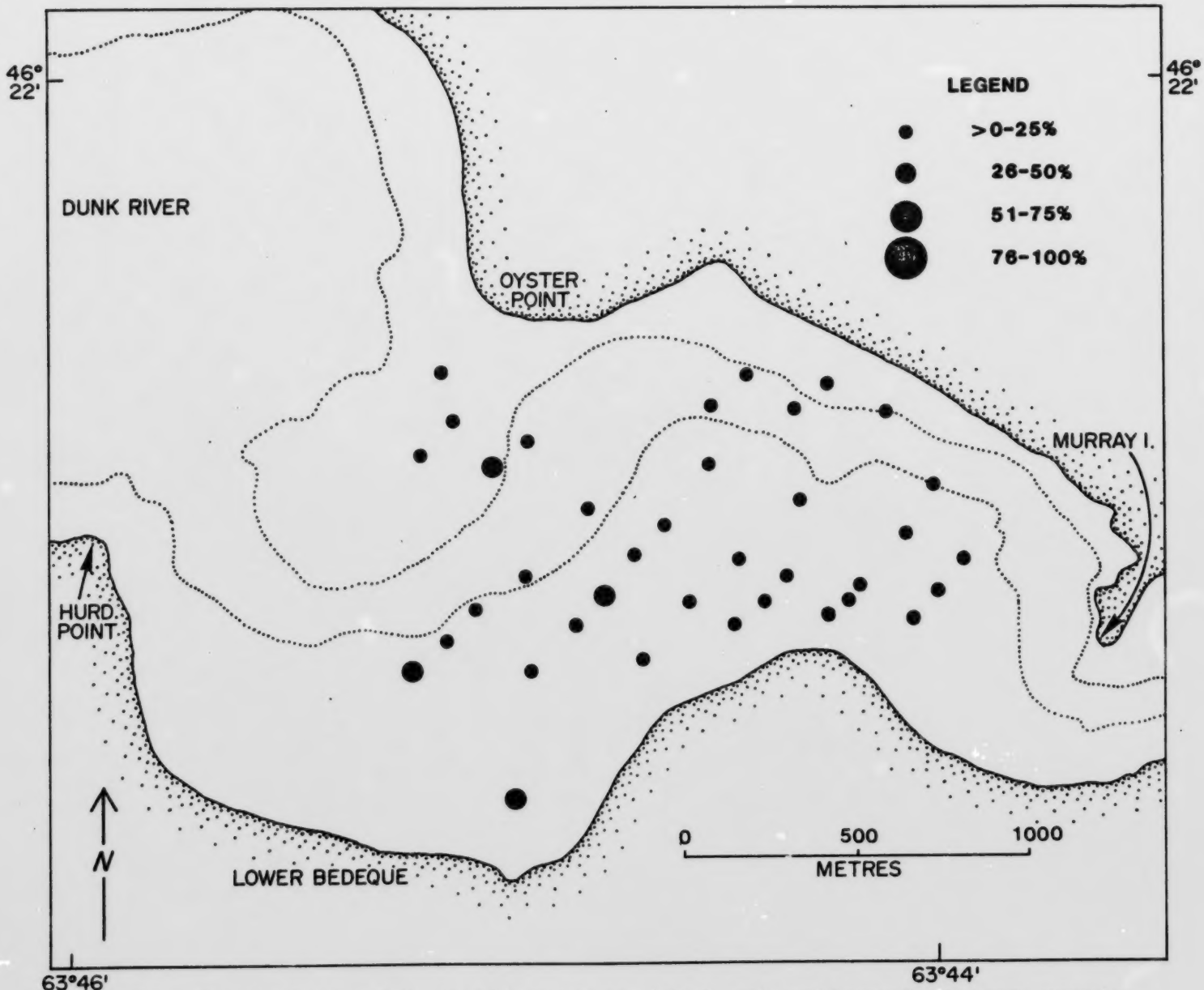


Figure 5a. Percentage of 1 yr old oysters (<2.5 cm) collected at each station.

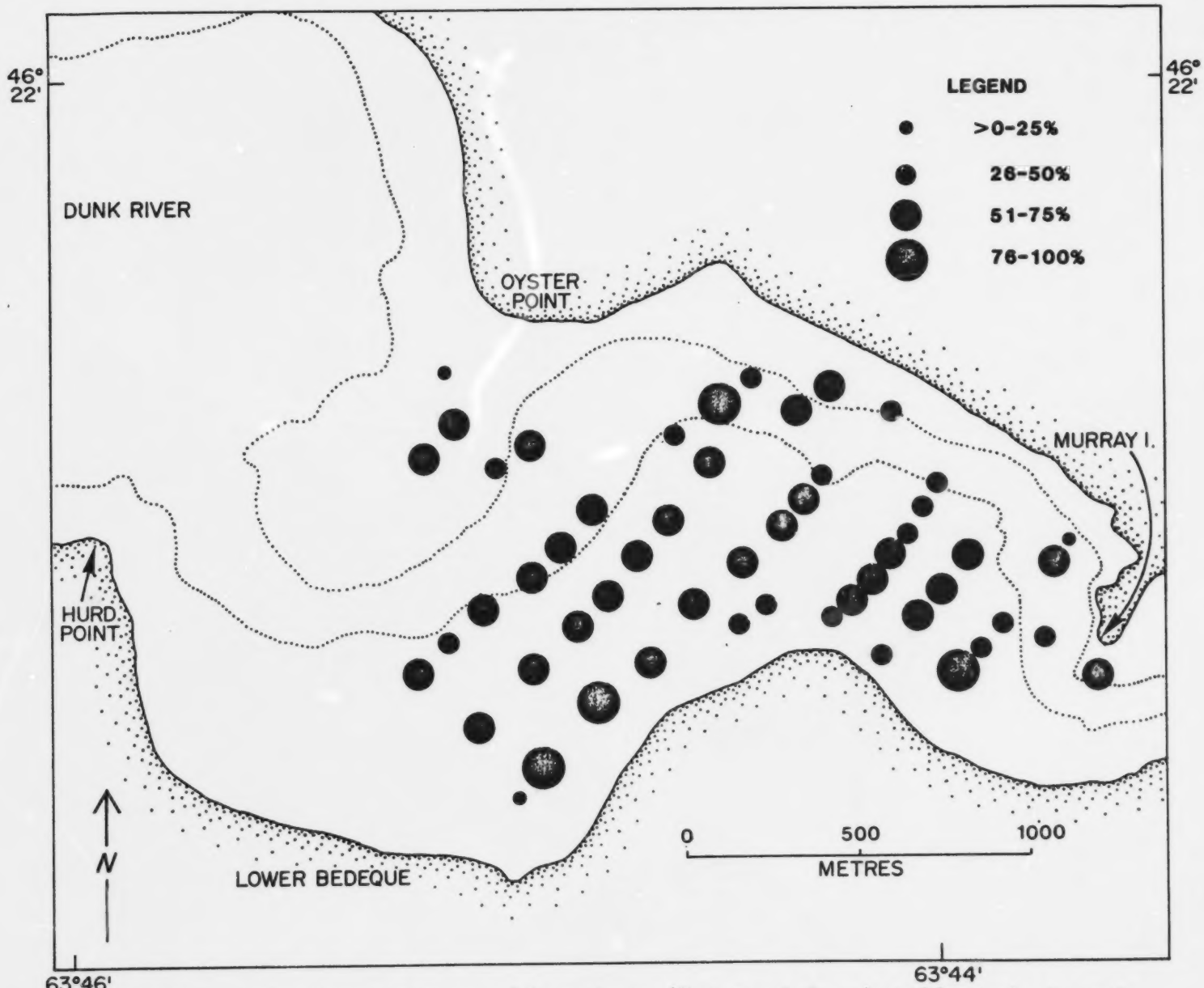


Figure 5b. Percentage of 2 yr old oysters (2.6 to 4.5 cm) collected at each station.

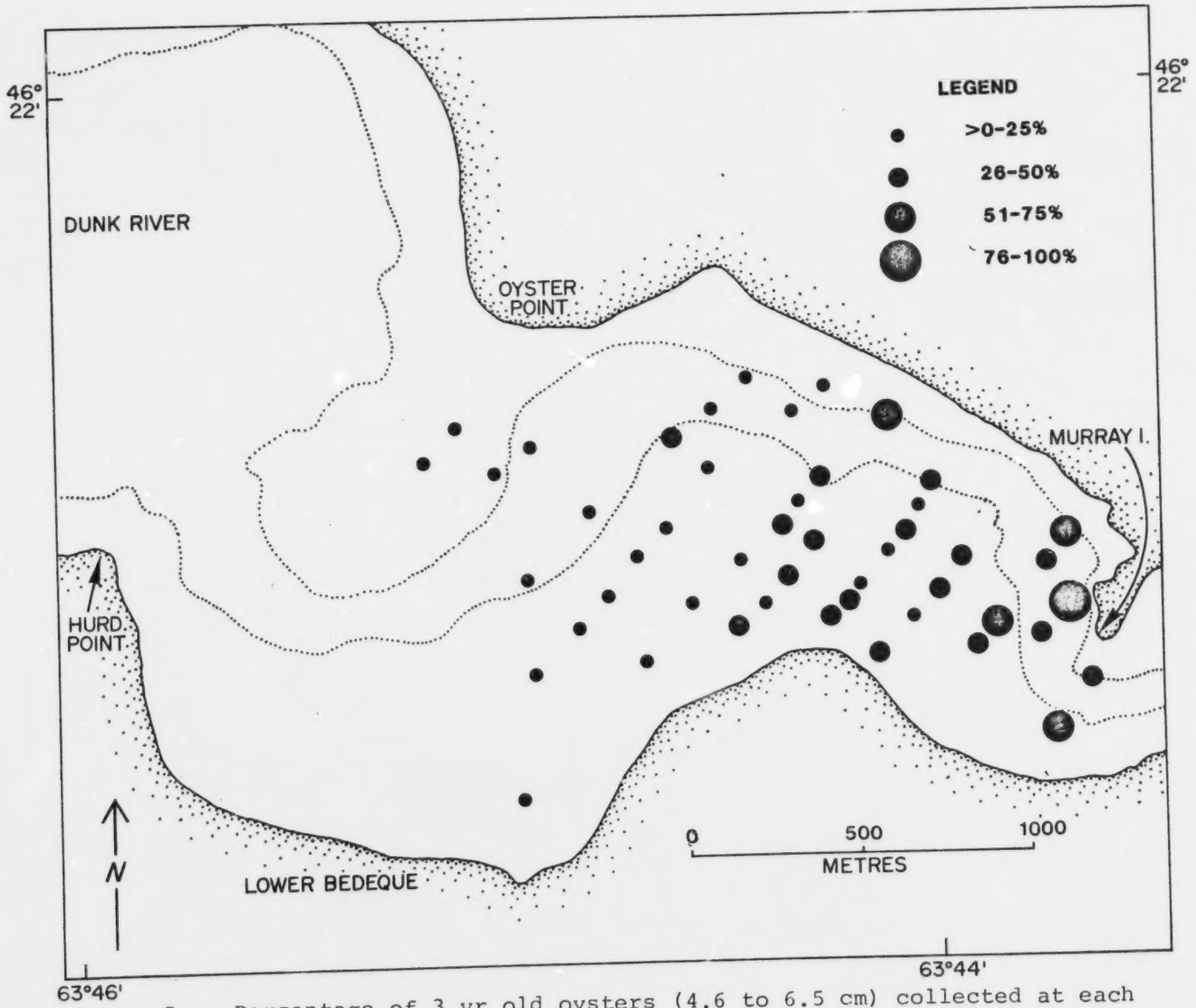


Figure 5c. Percentage of 3 yr old oysters (4.6 to 6.5 cm) collected at each station.

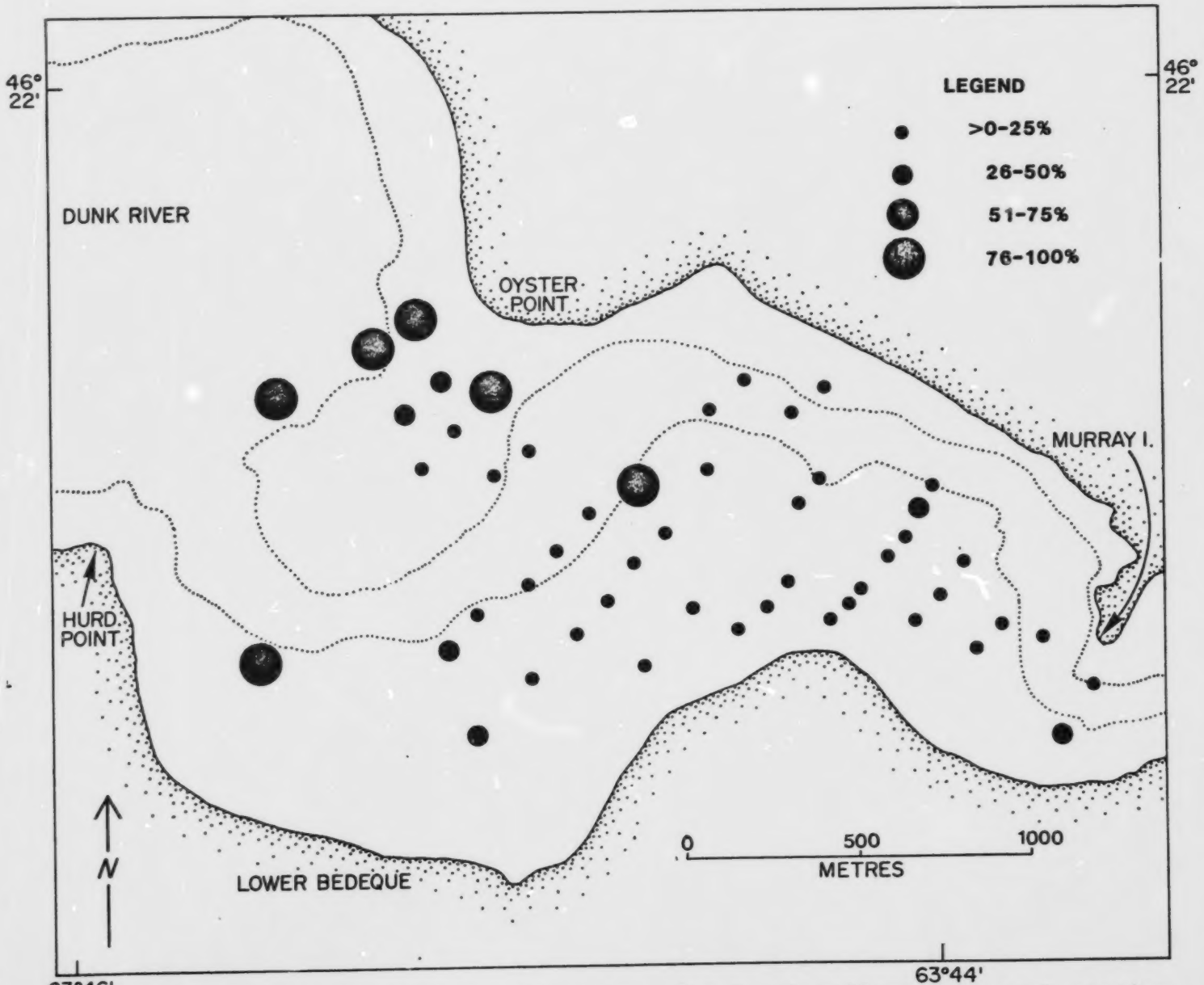


Figure 5d. Percentage of 4+ yr old oysters (>6.5 cm) collected at each station.

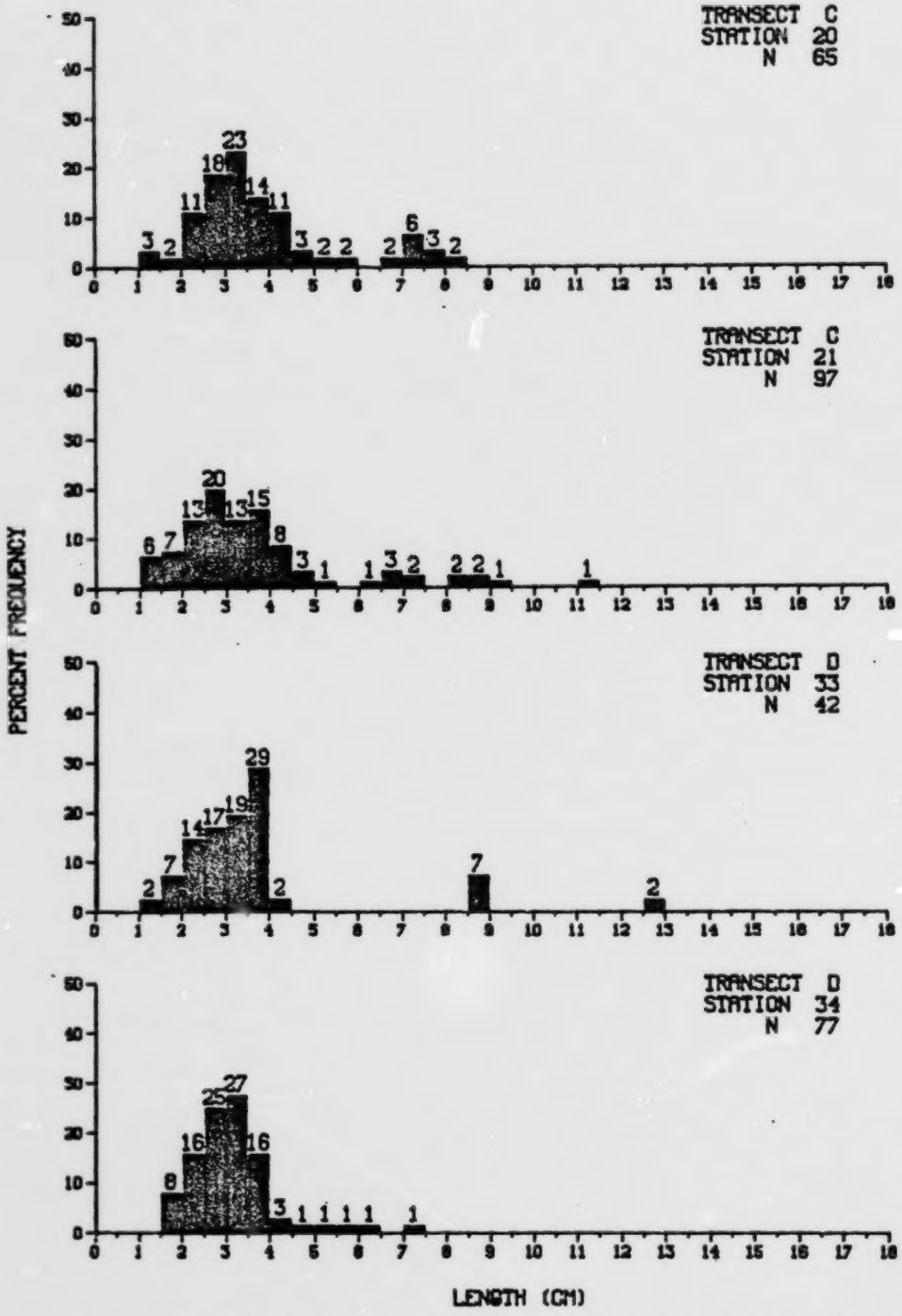
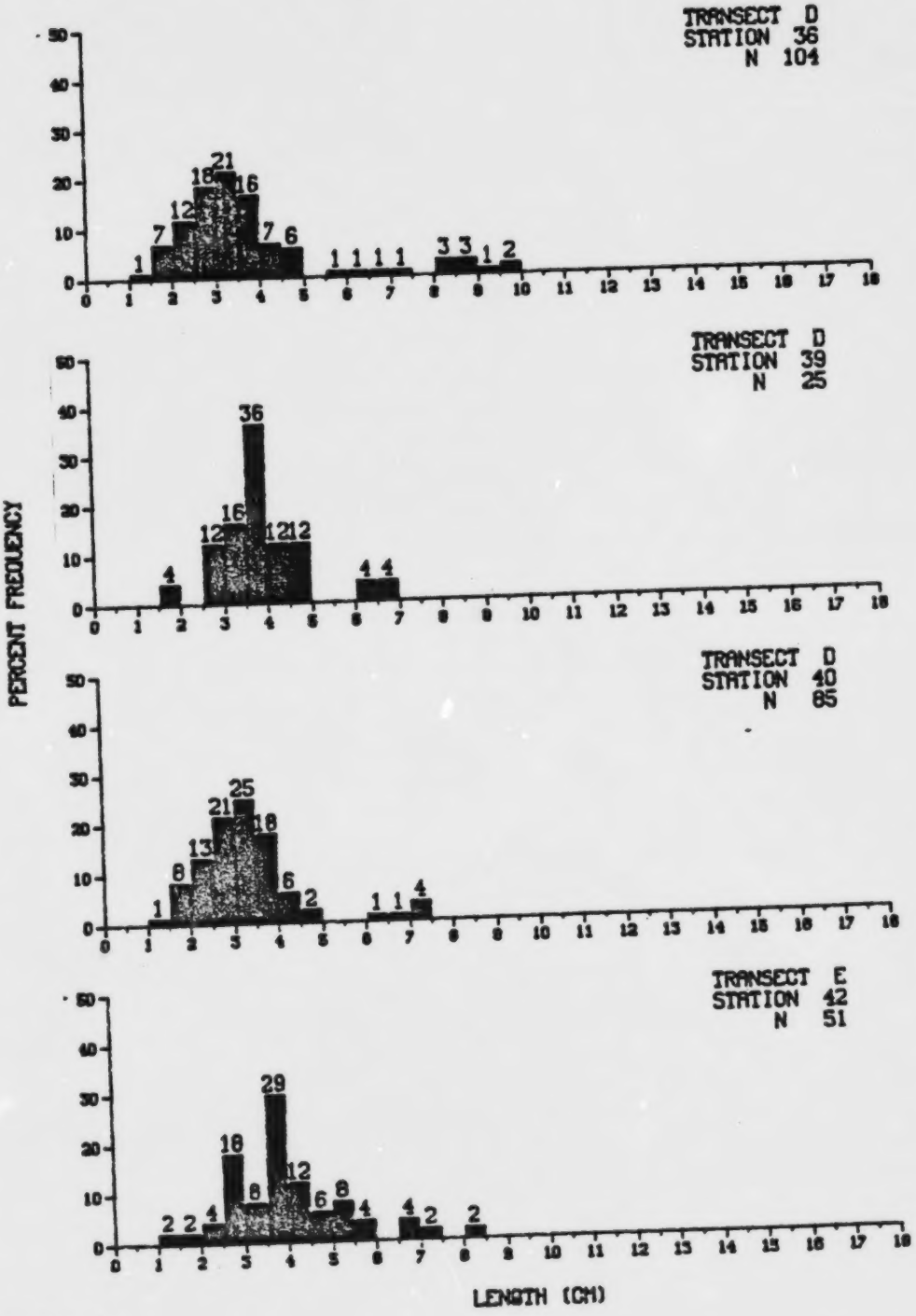


Figure 6. Size frequency distribution of oysters collected at each station in 1969; 1 yr olds < 2.5 cm in length, 2 yr olds 2.6-4.5 cm, 3 yr olds 4.6-6.5 cm and 4, + yr olds >6.5 cm.



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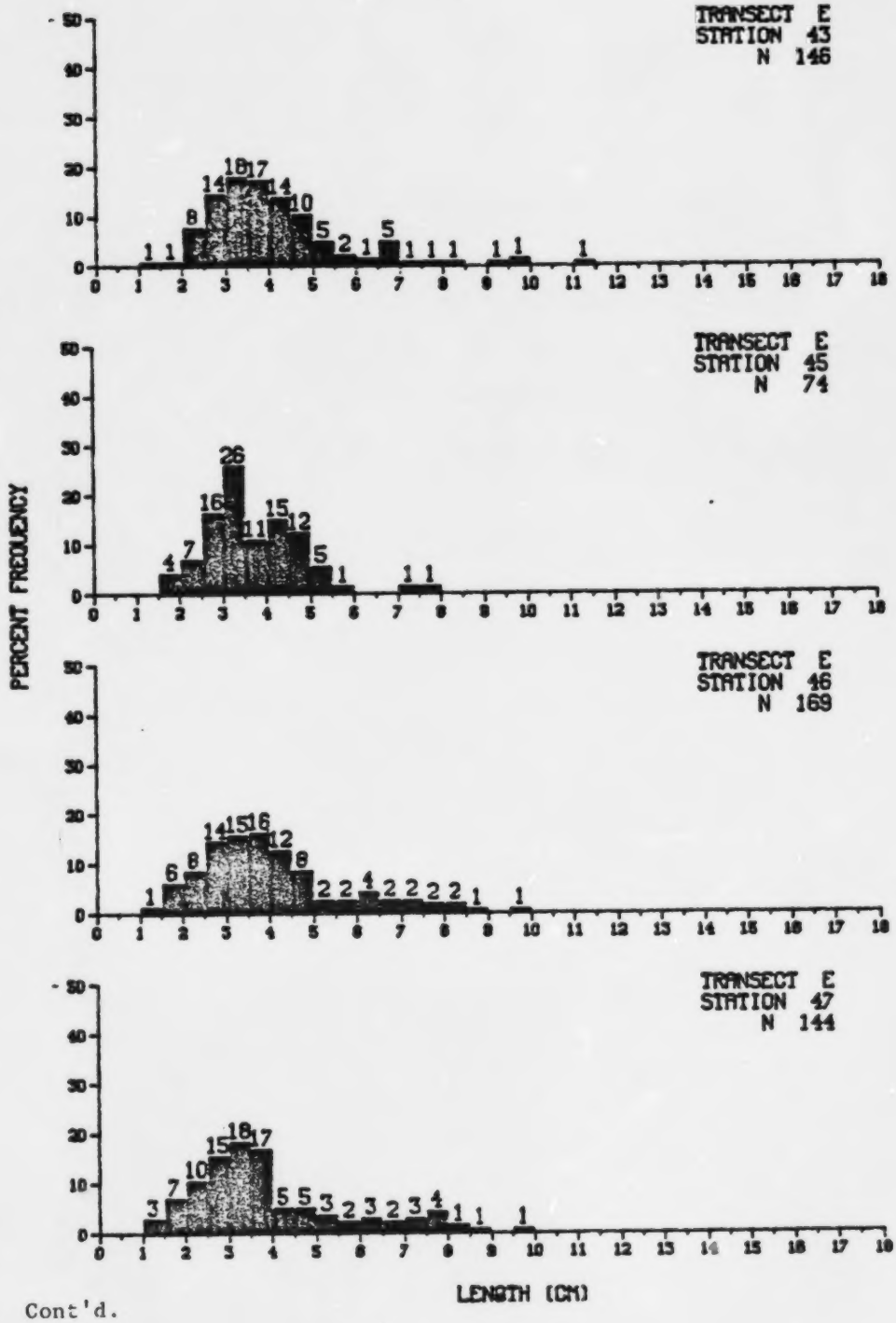
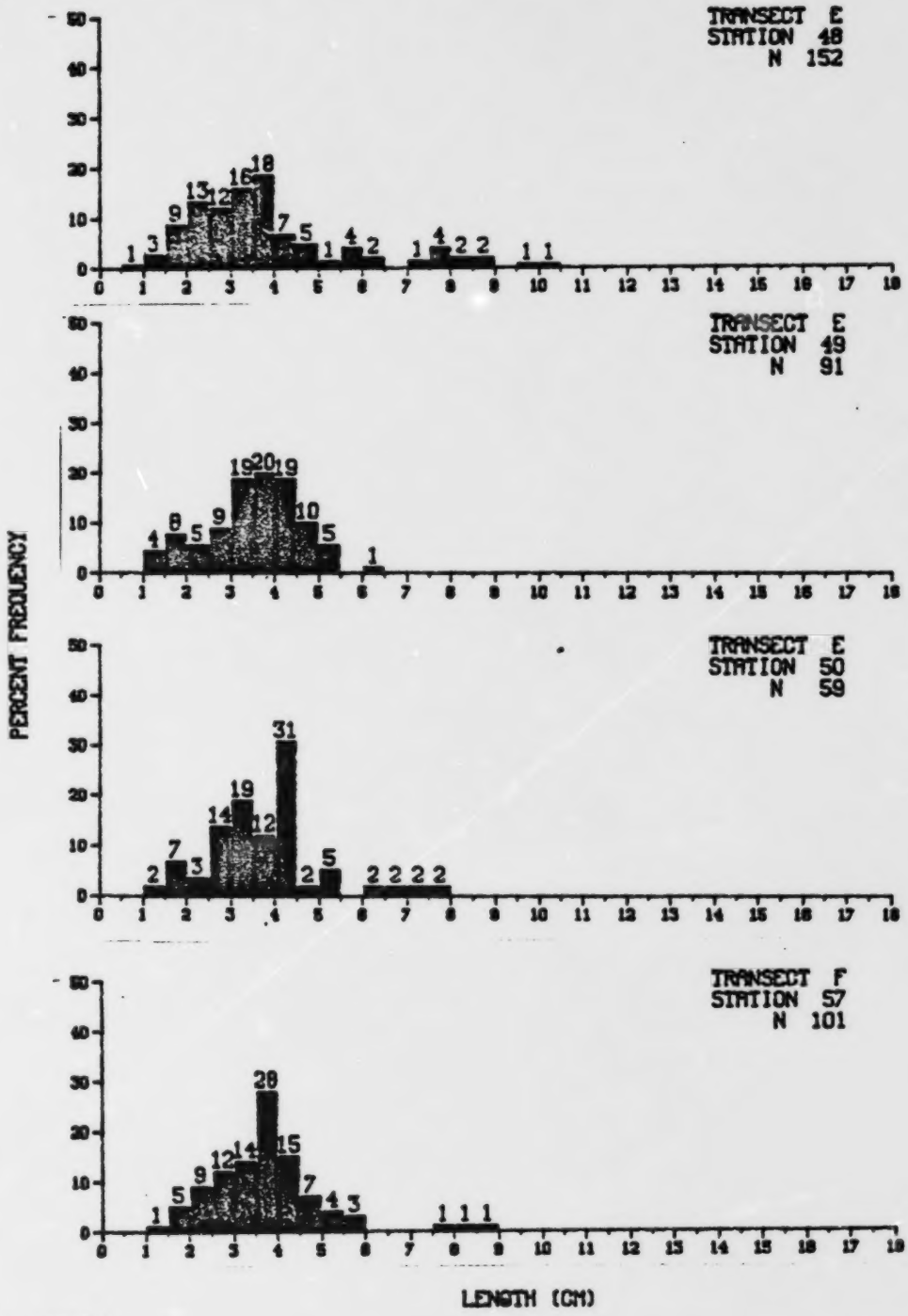


Figure 6. Cont'd.



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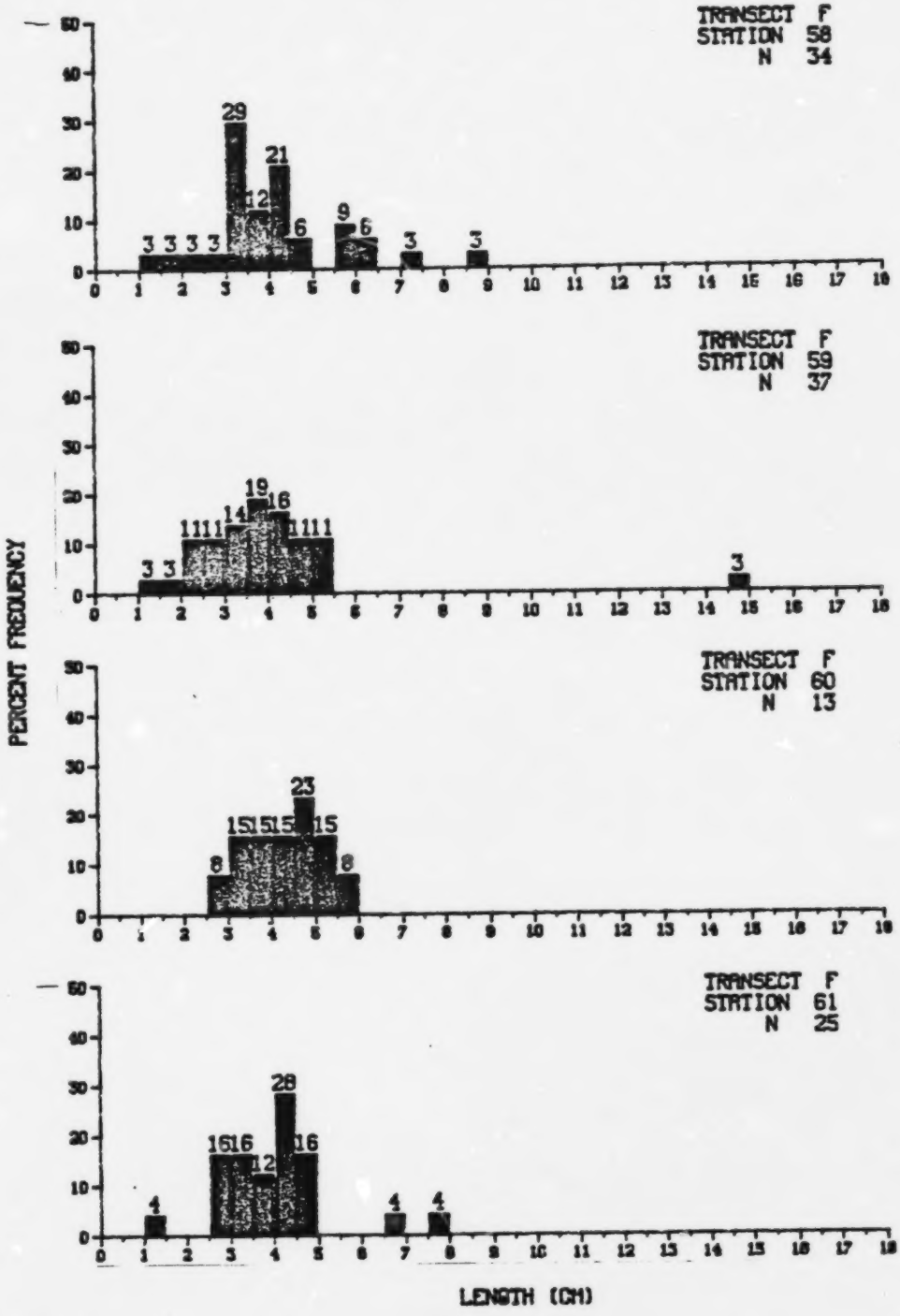

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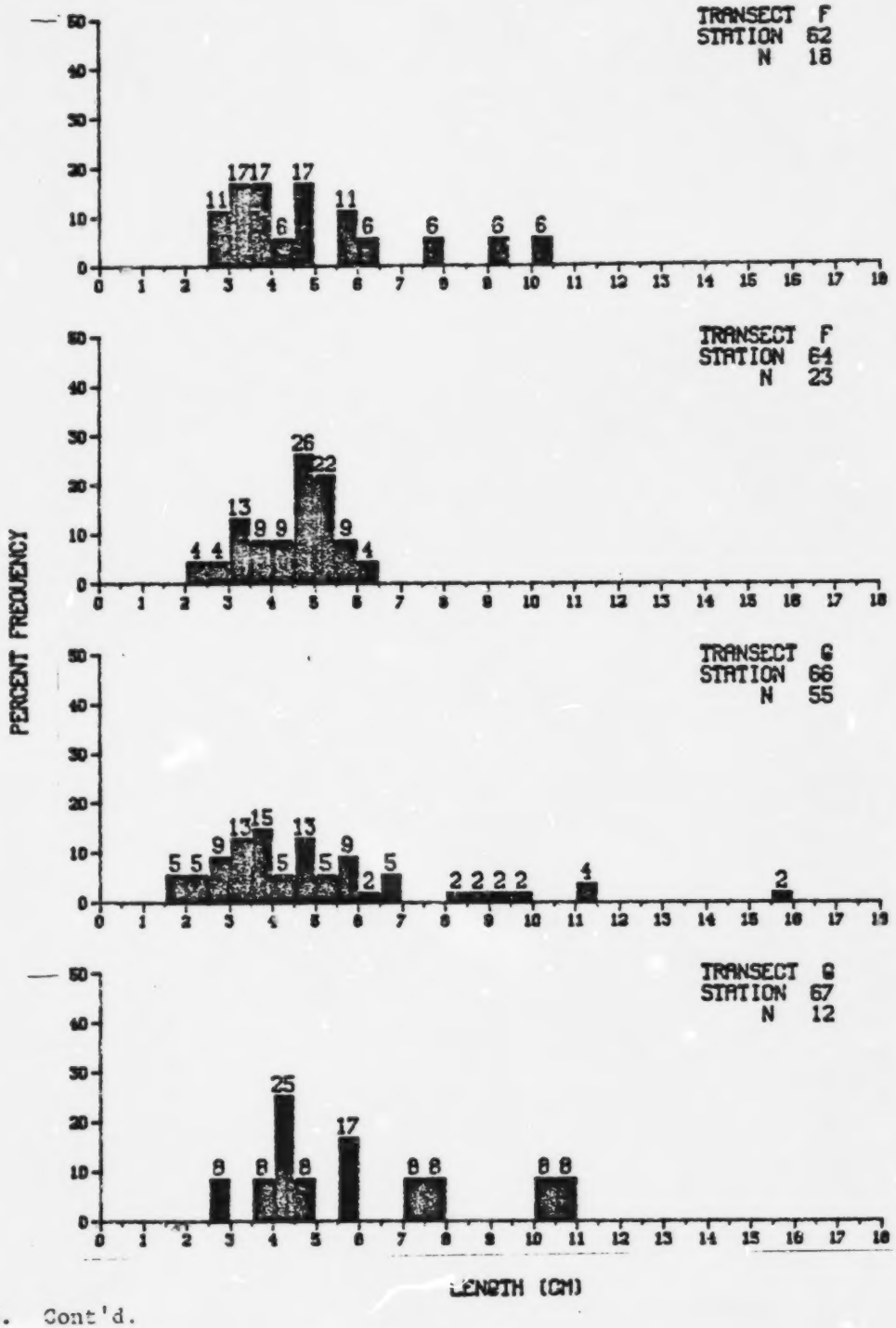

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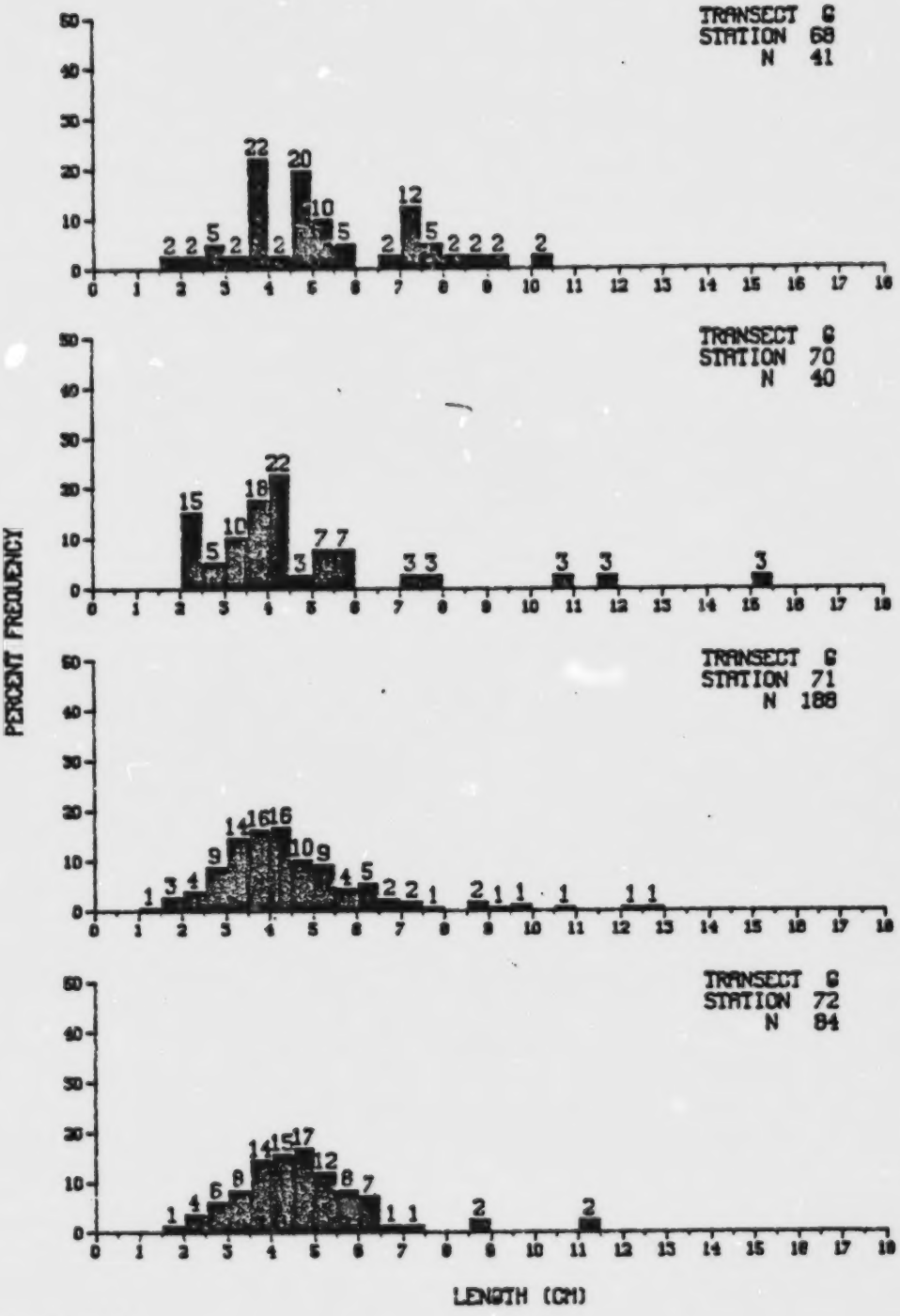

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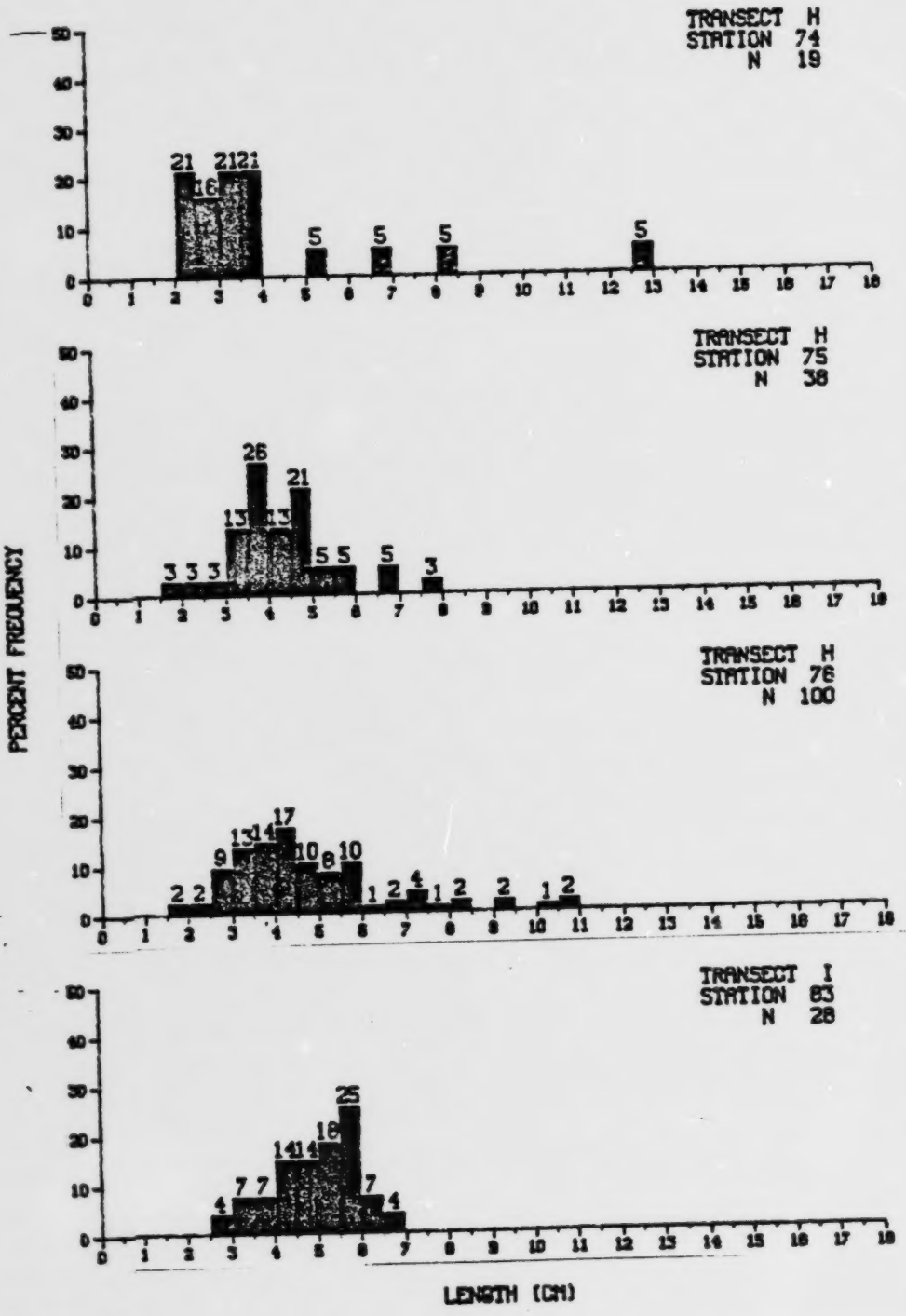

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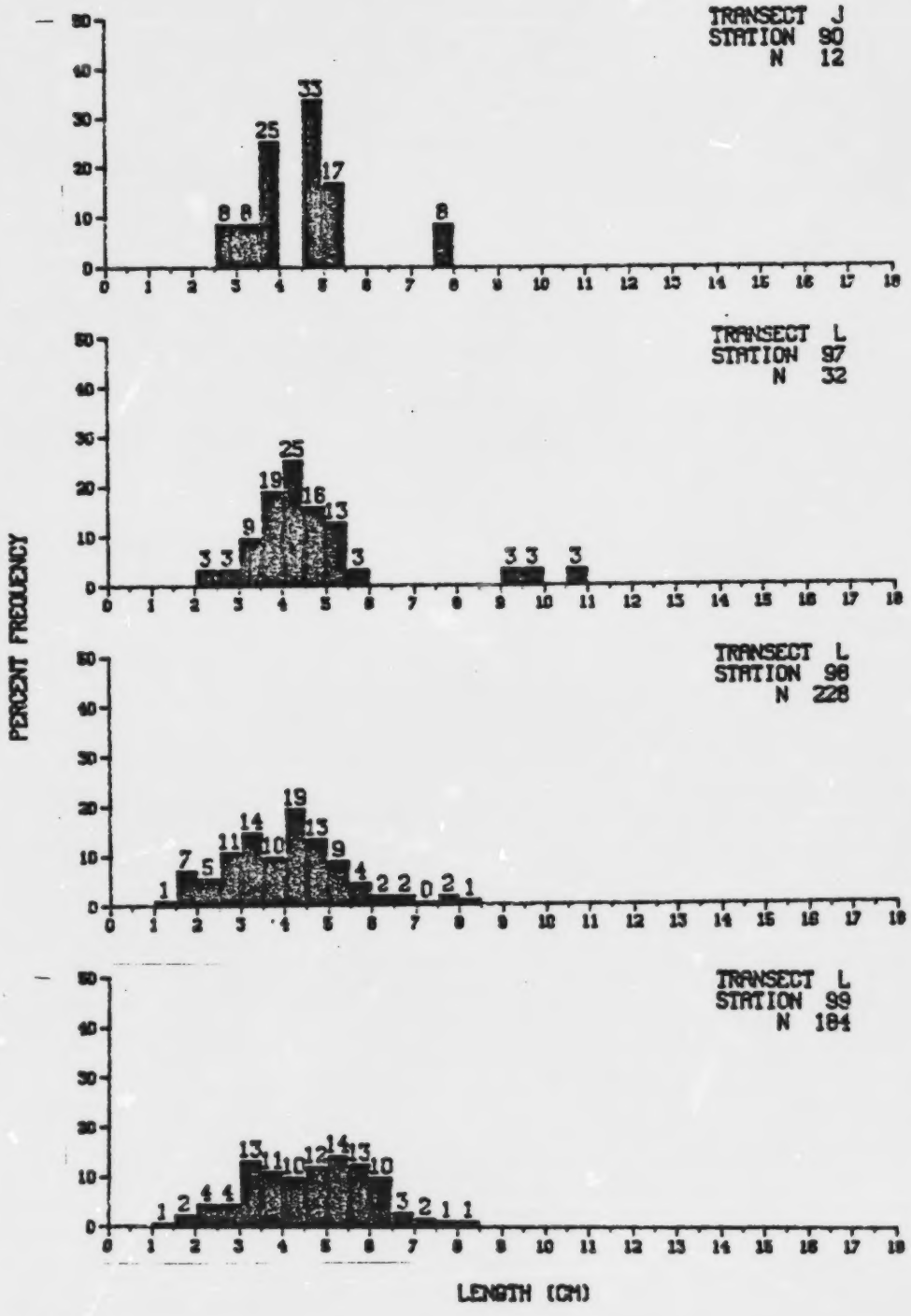

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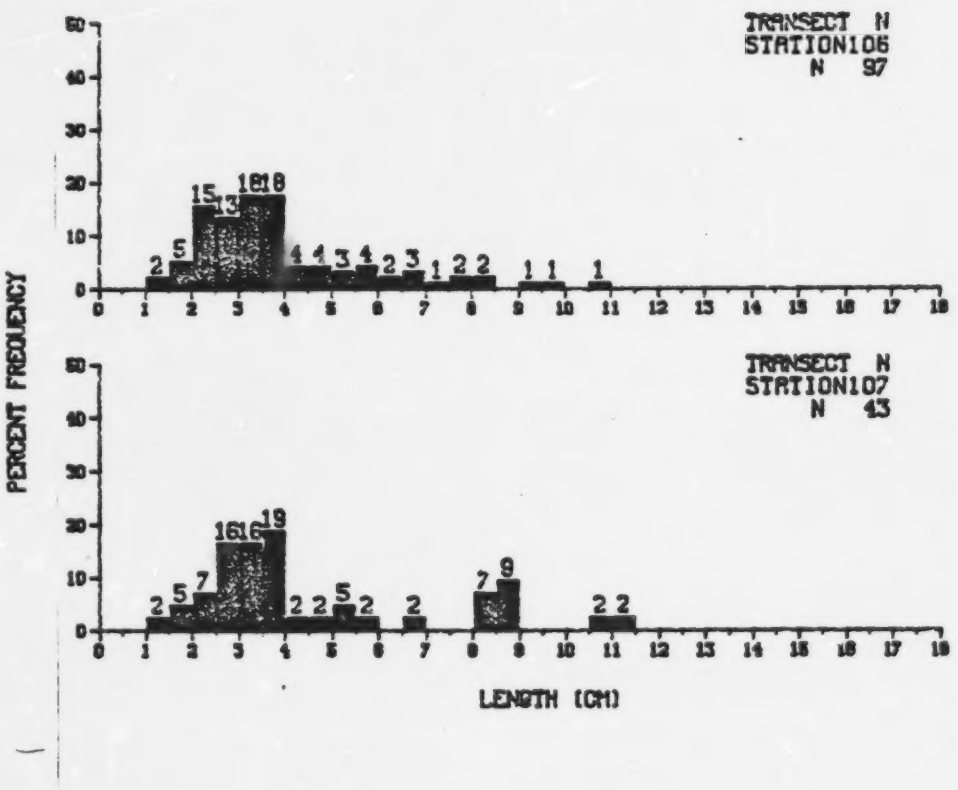


Figure 6. Cont'd.

TOTAL N = 2924.0

SIZE (CM)	FREQ. %	SIZE (CM)	FREQ. %
0.5	0.00	9.5	0.41
1.0	0.03	10.0	0.51
1.5	1.33	10.5	0.24
2.0	4.41	11.0	0.34
2.5	7.59	11.5	0.27
3.0	12.11	12.0	0.10
3.5	15.63	12.5	0.07
4.0	16.28	13.0	0.10
4.5	12.14	13.5	0.00
5.0	8.03	14.0	0.07
5.5	5.75	14.5	0.03
6.0	4.14	15.0	0.07
6.5	2.46	15.5	0.03
7.0	1.85	16.0	0.03
7.5	1.57	16.5	0.00
8.0	1.33	17.0	0.00
8.5	1.13	17.5	0.00
9.0	0.92	18.0	0.00

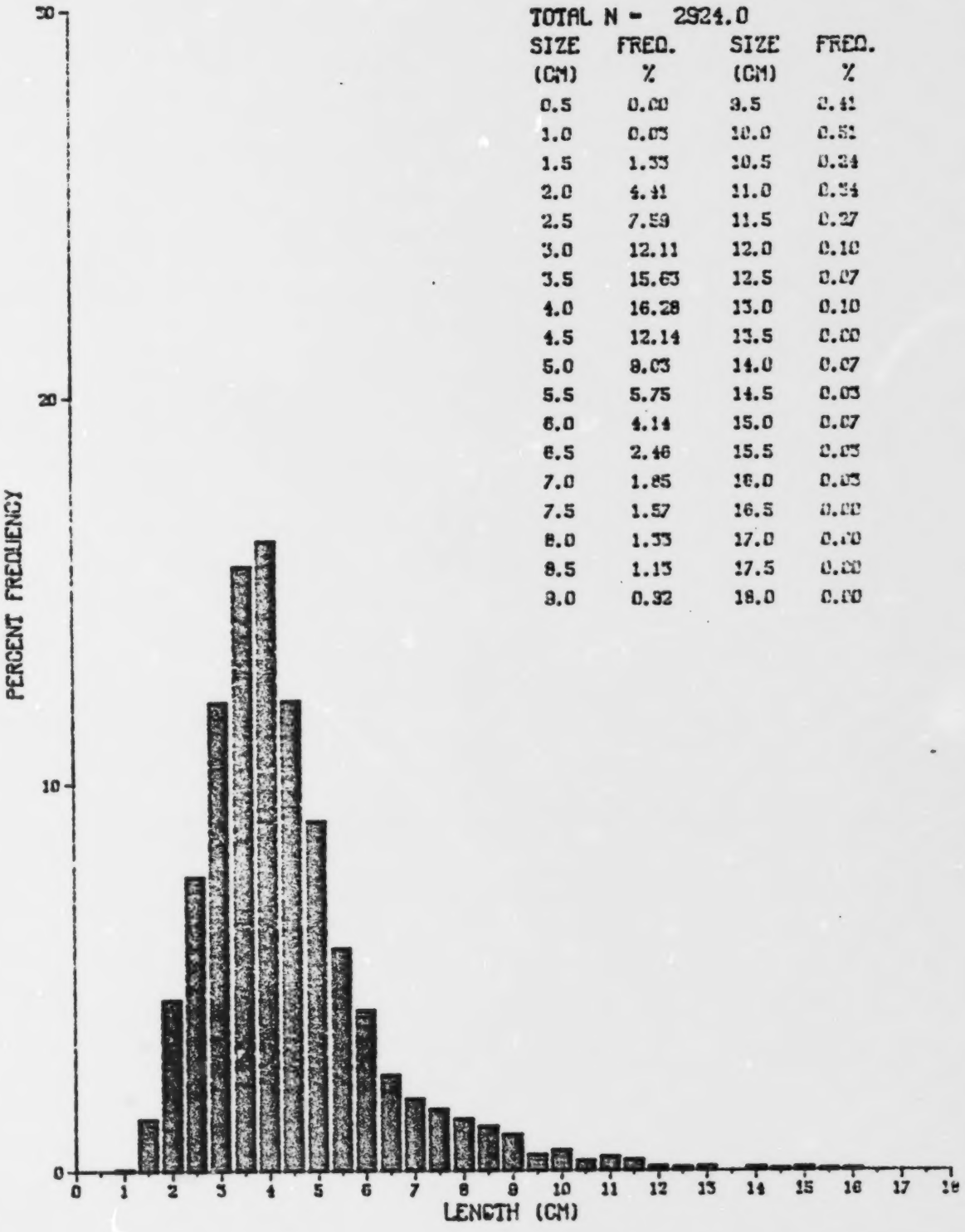


Figure 7. Size Frequency distribution of oysters collected over all stations in 1969: 1 yr olds < 2.5 cm in length, 2 yr olds 2.6-4.5 cm, 3 yr olds 4.6-6.5 cm and 4, + yr olds >6.5 cm.

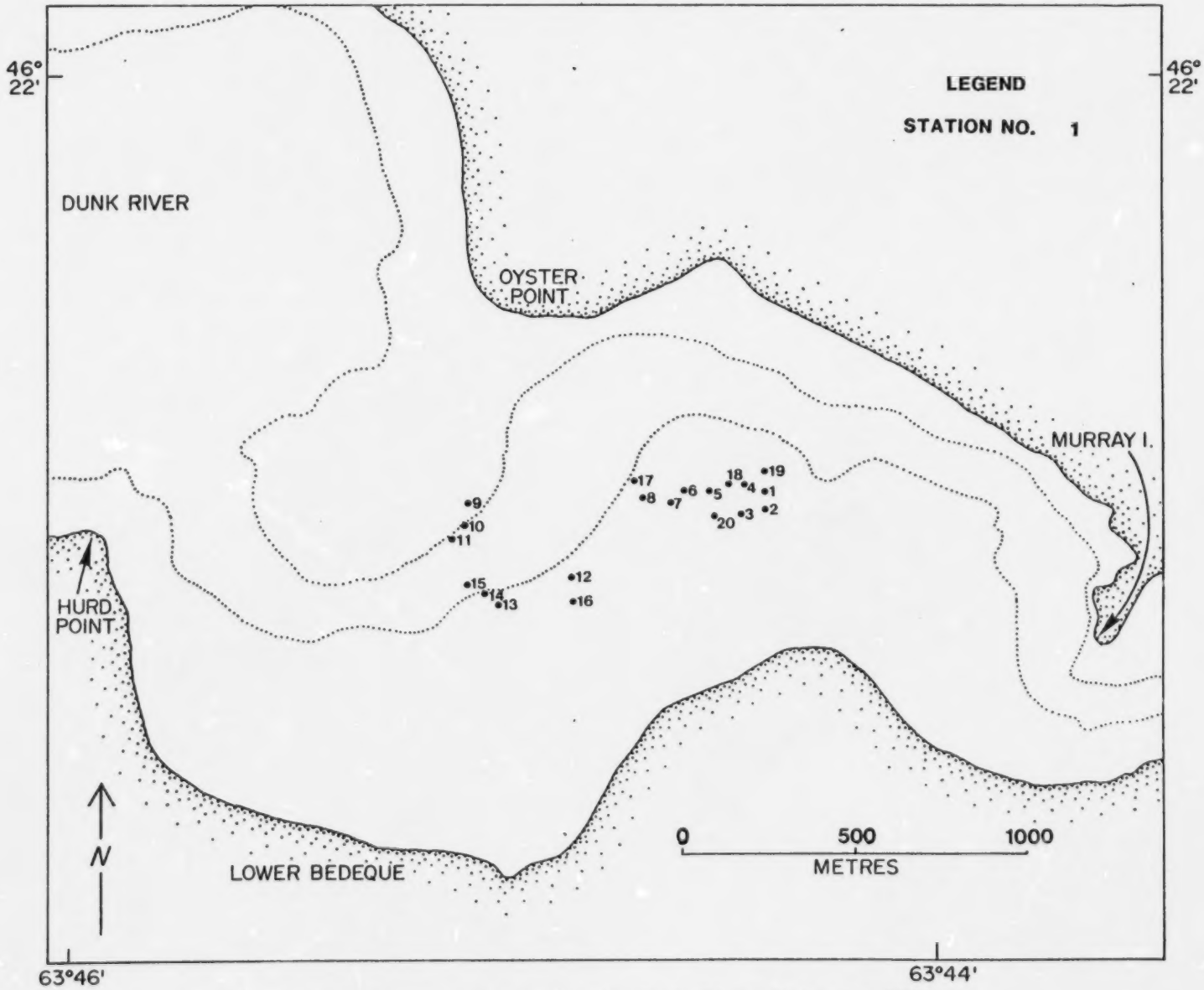


Figure 8. Positions of sampling stations in the Dunk River Estuary, 1970.

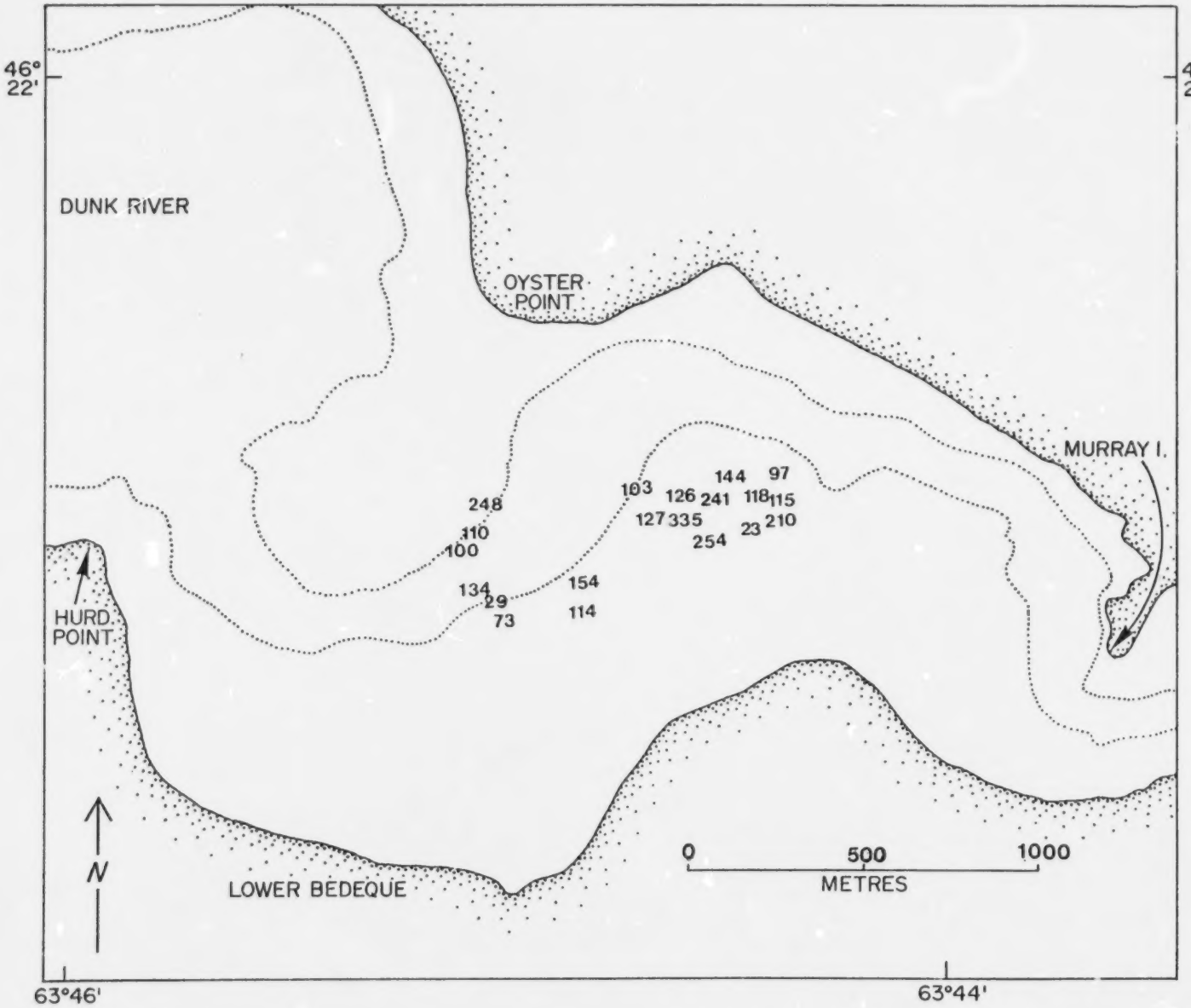


Figure 9. Number of oysters per square metre.

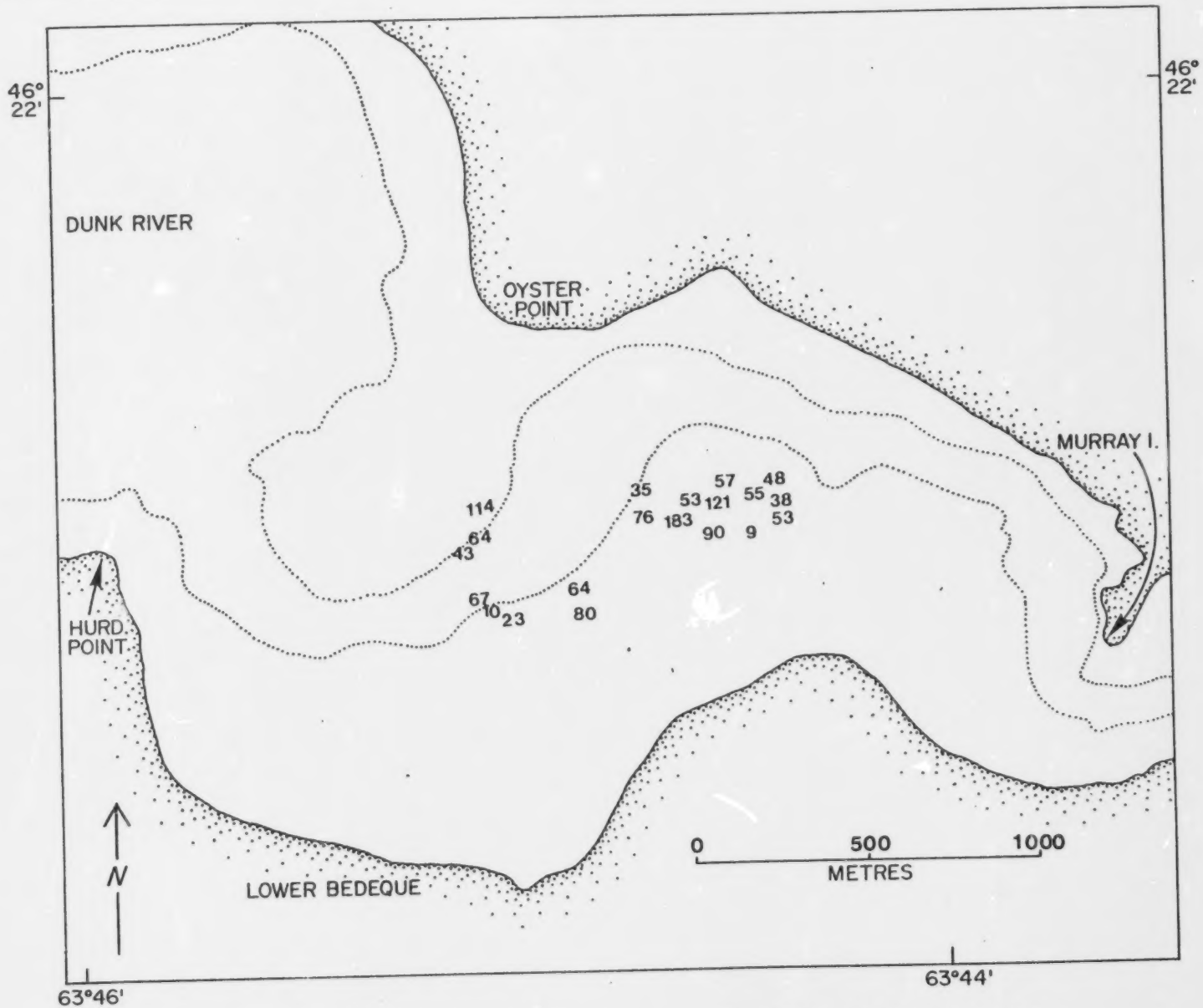


Figure 10a. Density m^{-2} of 1 yr old oysters ($\leq$ 2.5 cm) collected at each station.

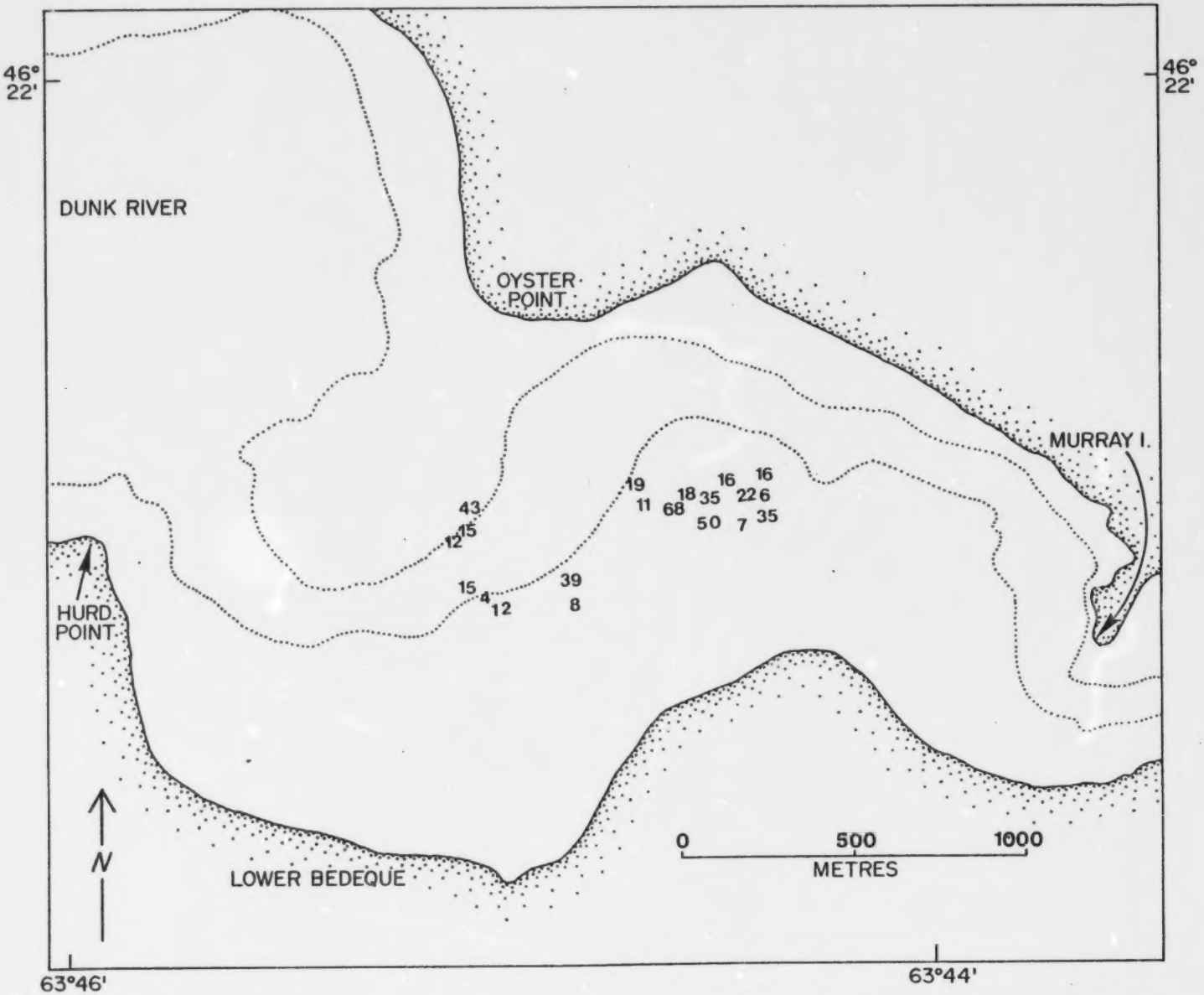


Figure 10b. Density m^{-2} of 2 yr old oysters (2.6 to 4.5 cm) collected at each station.

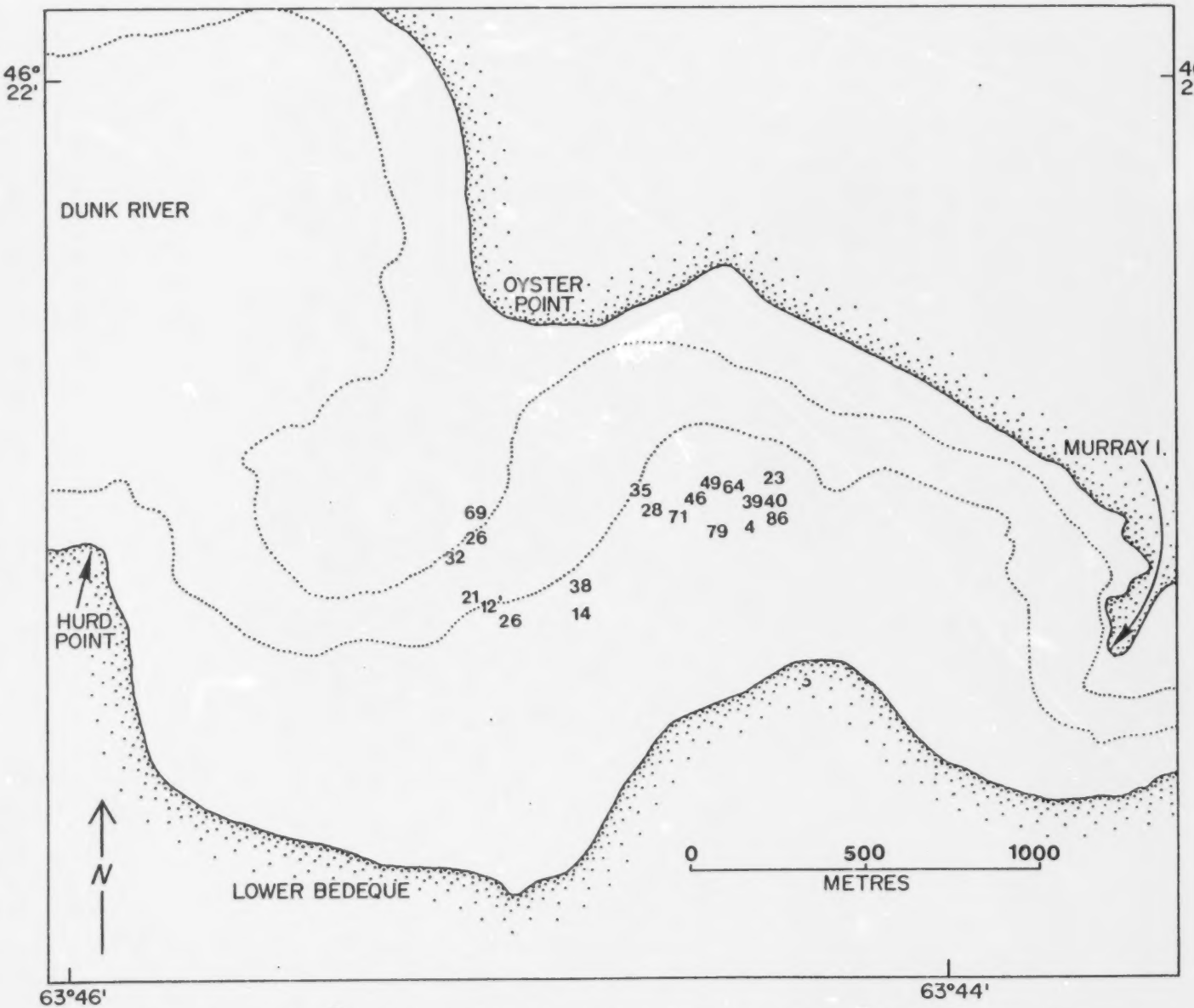


Figure 10c. Density m^{-2} of 3 yr old oysters (4.6 to 6.5) collected at each station.

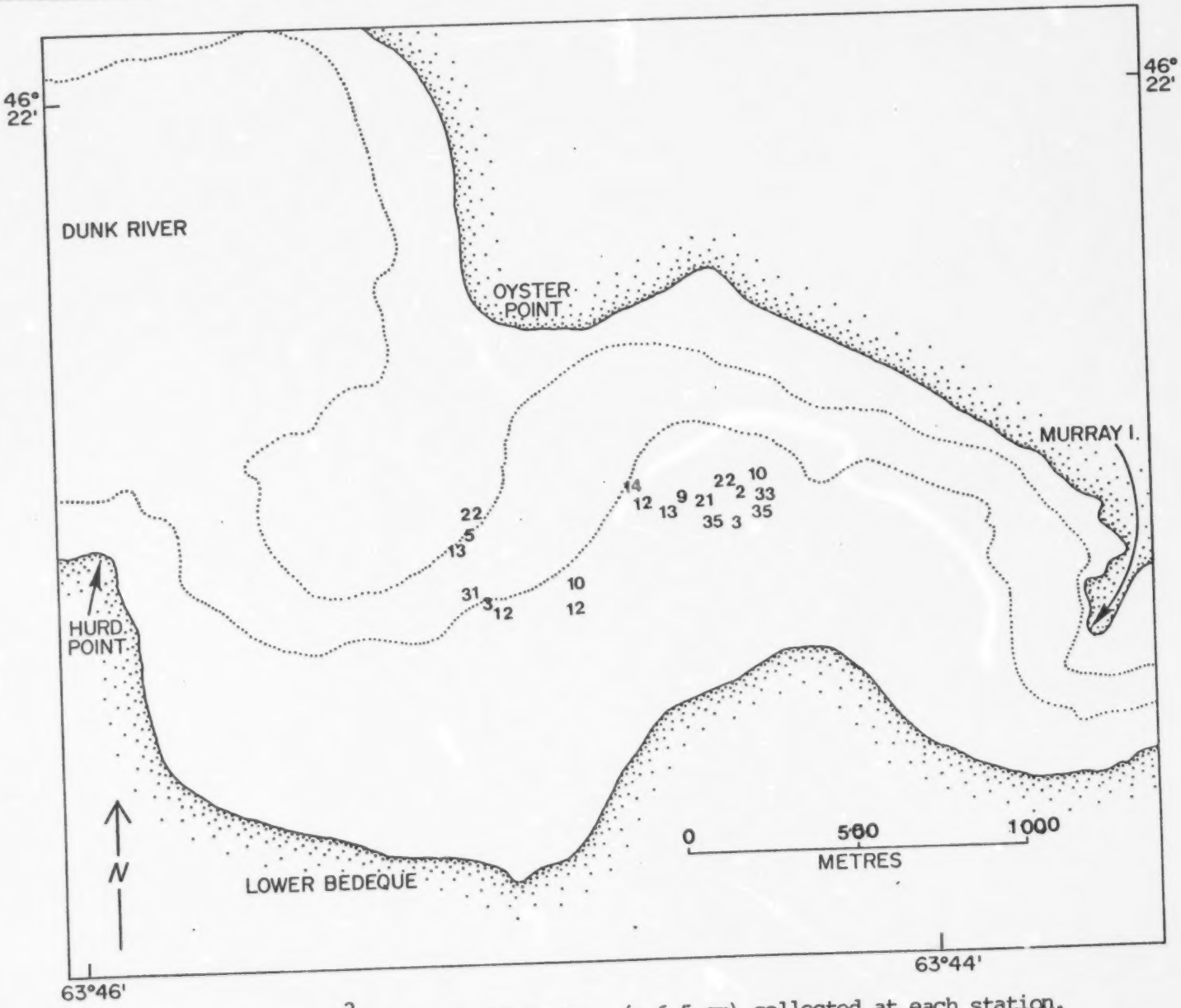


Figure 10d. Density m^{-2} of 4+ yr old oysters (> 6.5 cm) collected at each station.

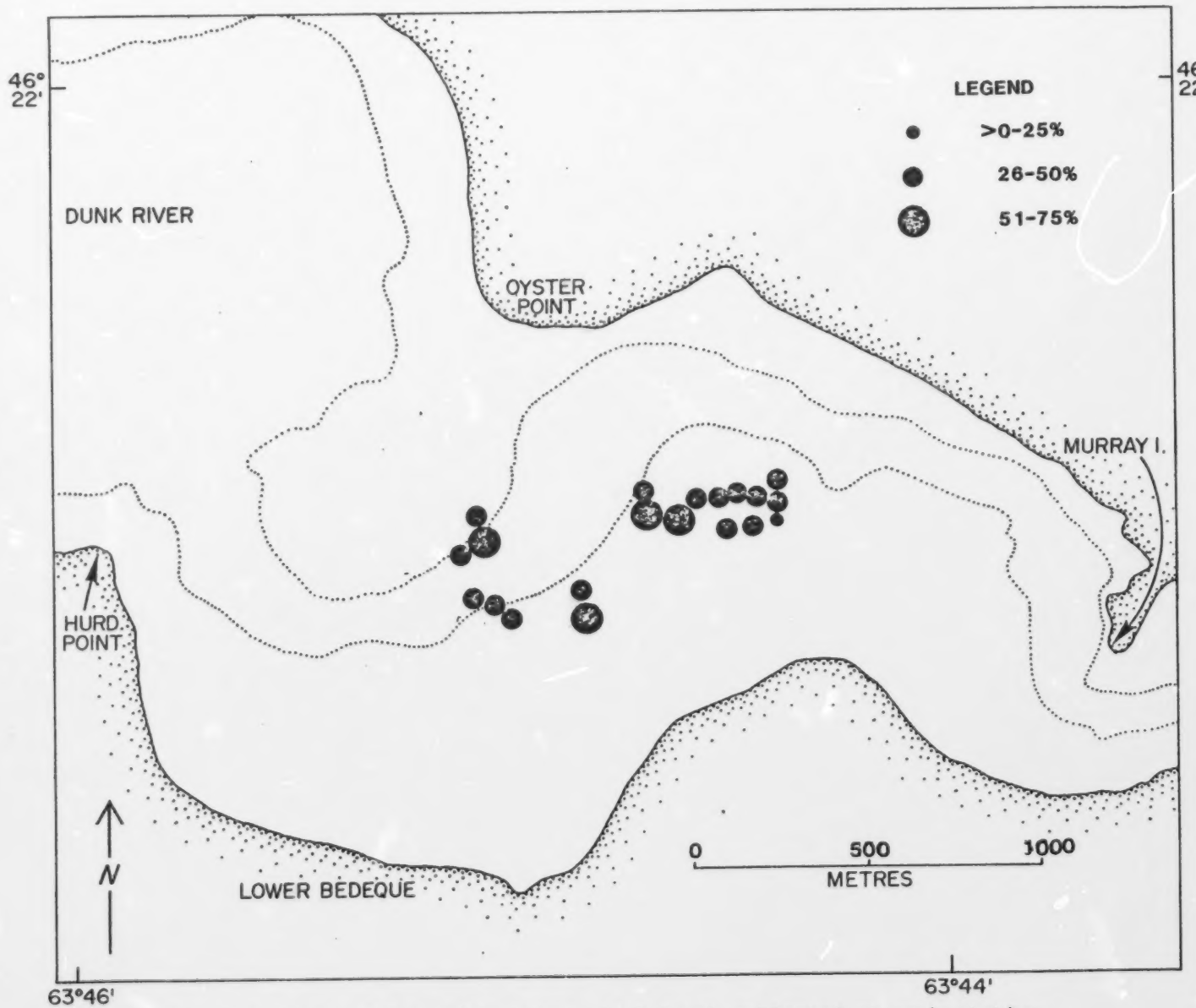


Figure 11a. Percentage of 1 yr old oysters (≤ 2.5 cm) collected at each station.

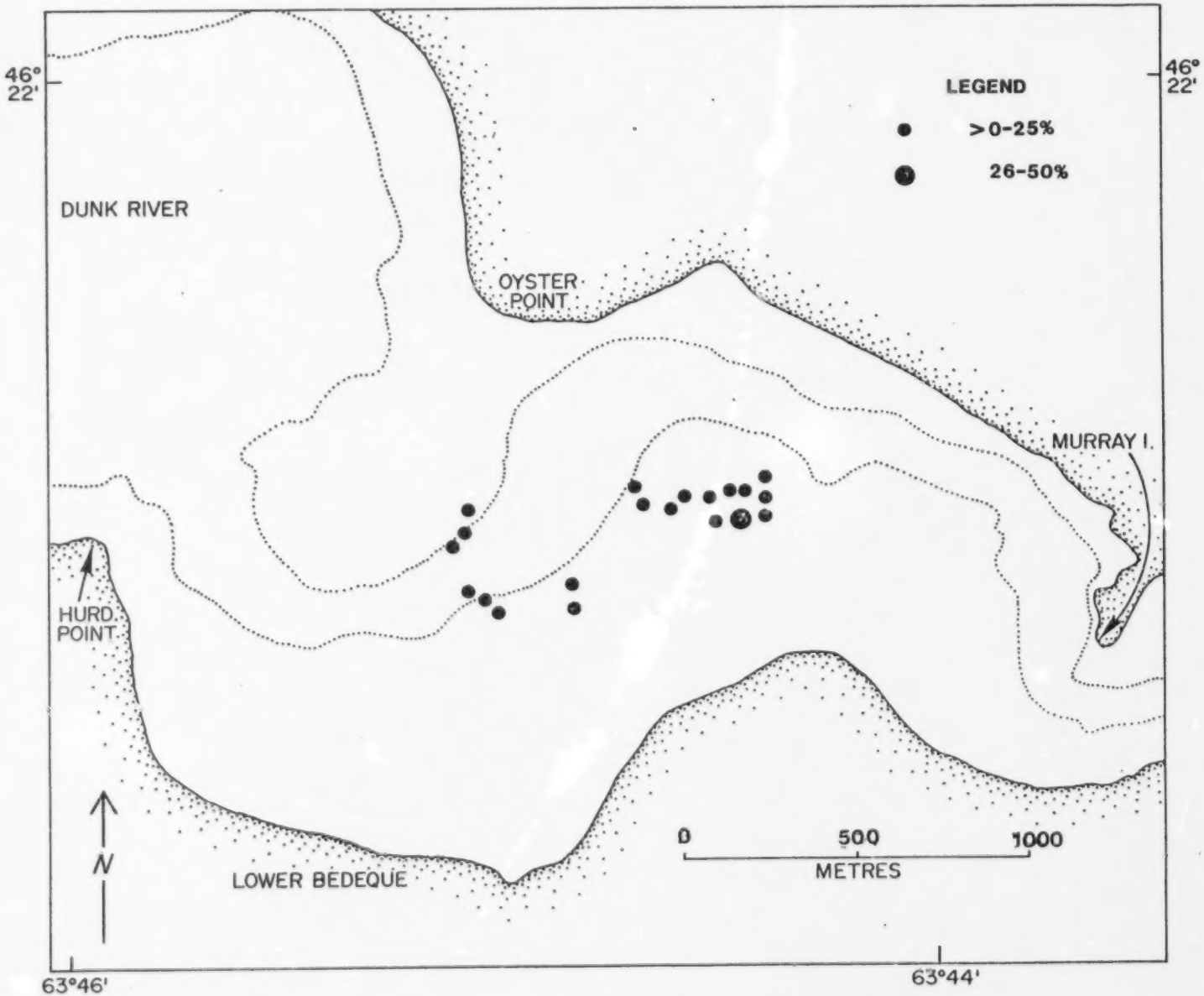


Figure 11b. Percentage of 2 yr old oysters (2.6 to 4.5 cm) collected at each station.

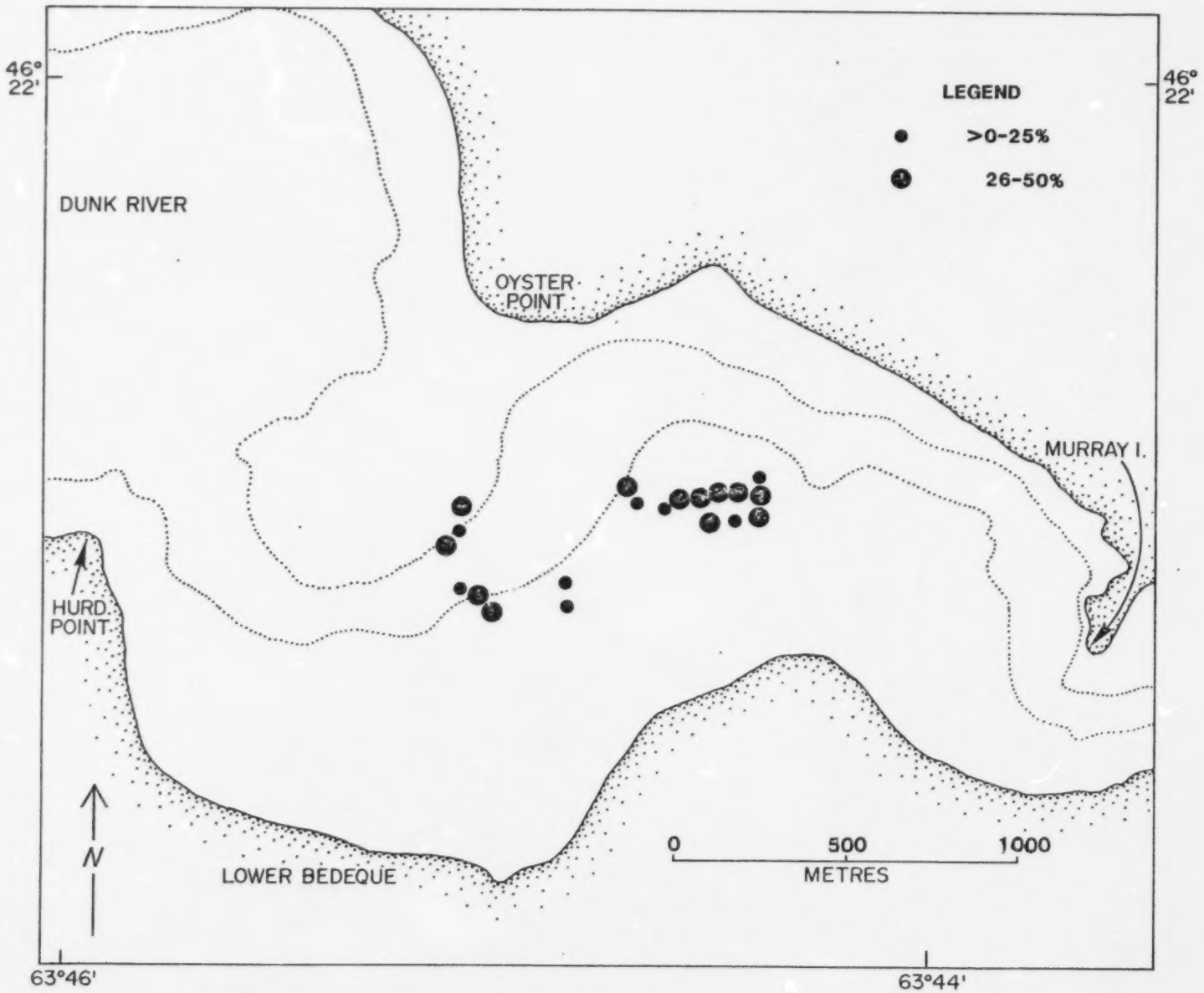


Figure 11c. Percentage of 3 yr old oysters (4.6 to 6.5 cm) collected at each station.

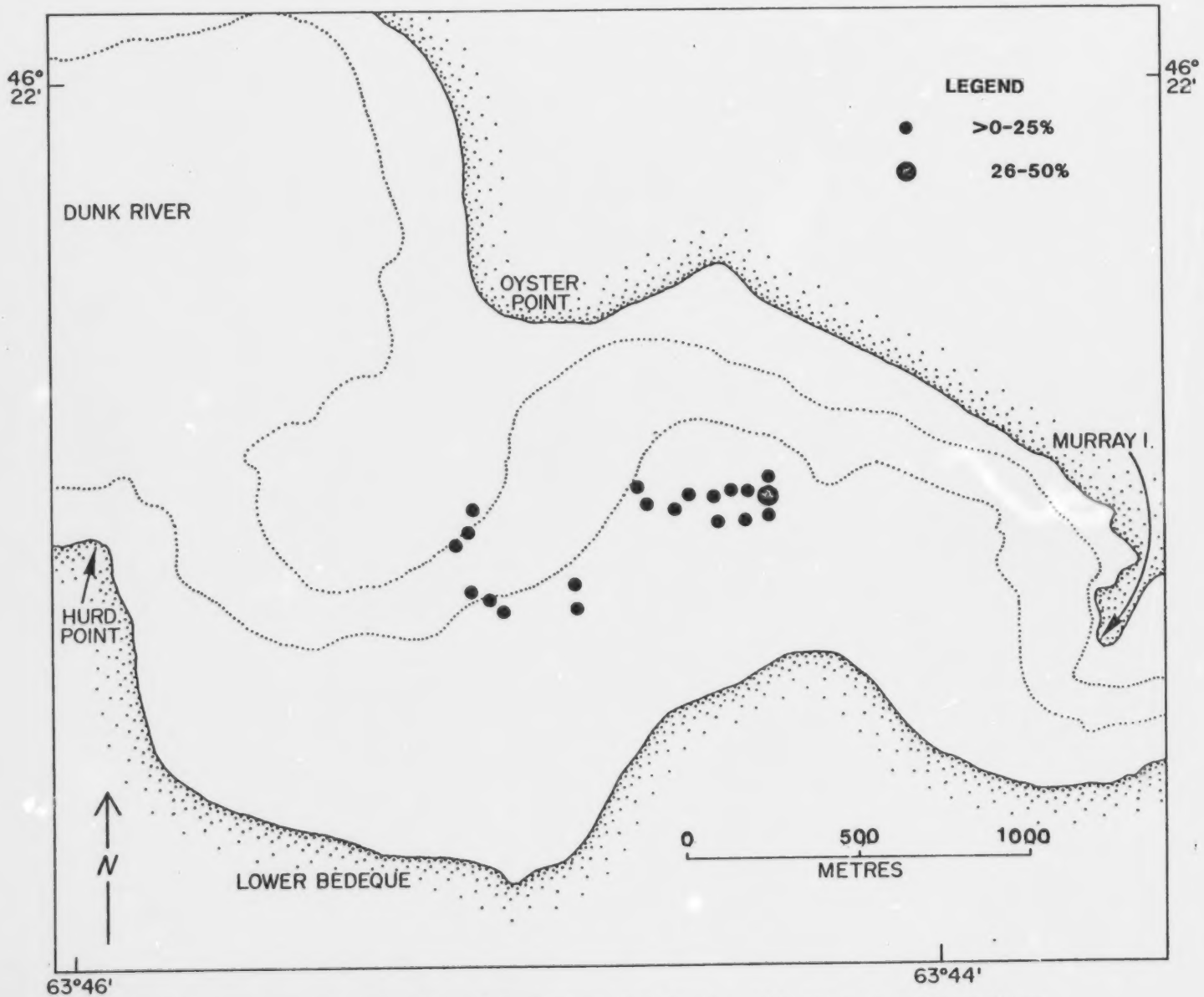


Figure 11d. Percentage of 4+ yr old oysters (>6.5 cm) collected at each station.

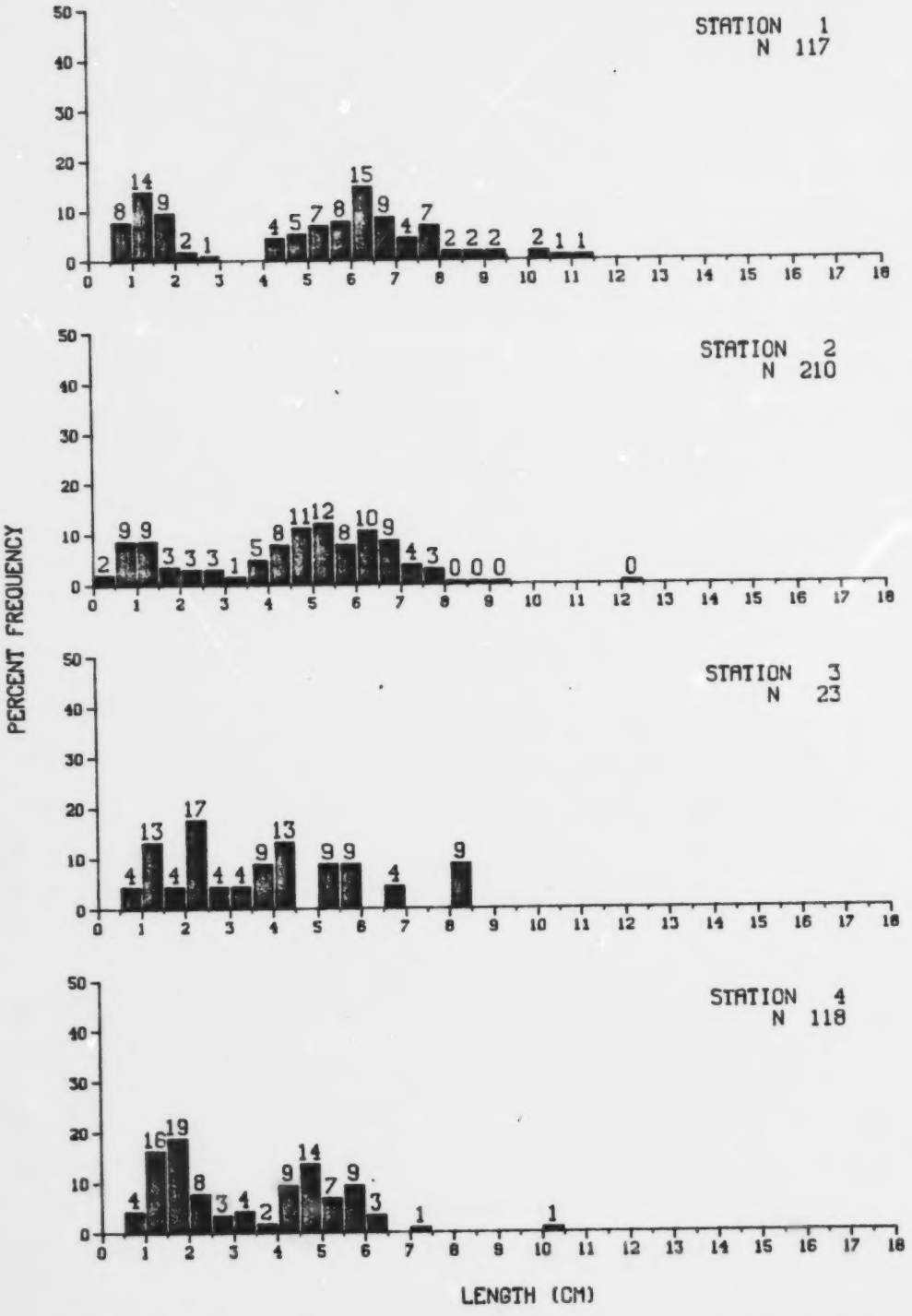
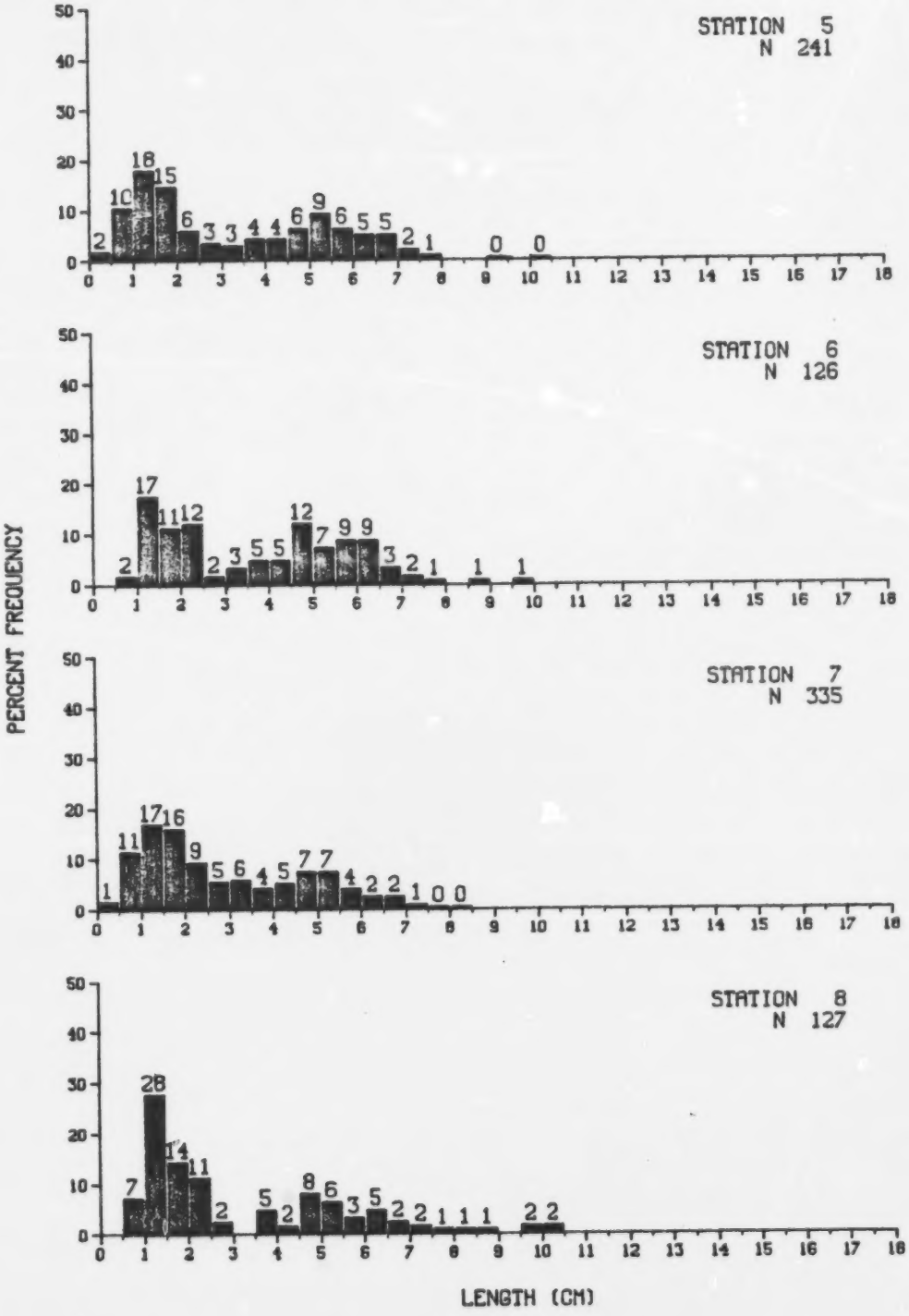


Figure 12. Size frequency distribution of oysters collected at each station in 1970: 1 yr olds < 2.5 cm in length, 2 yr olds 2.6-4.5 cm, 3 yr olds 4.6-6.5 cm and 4, + yr olds >6.5 cm.



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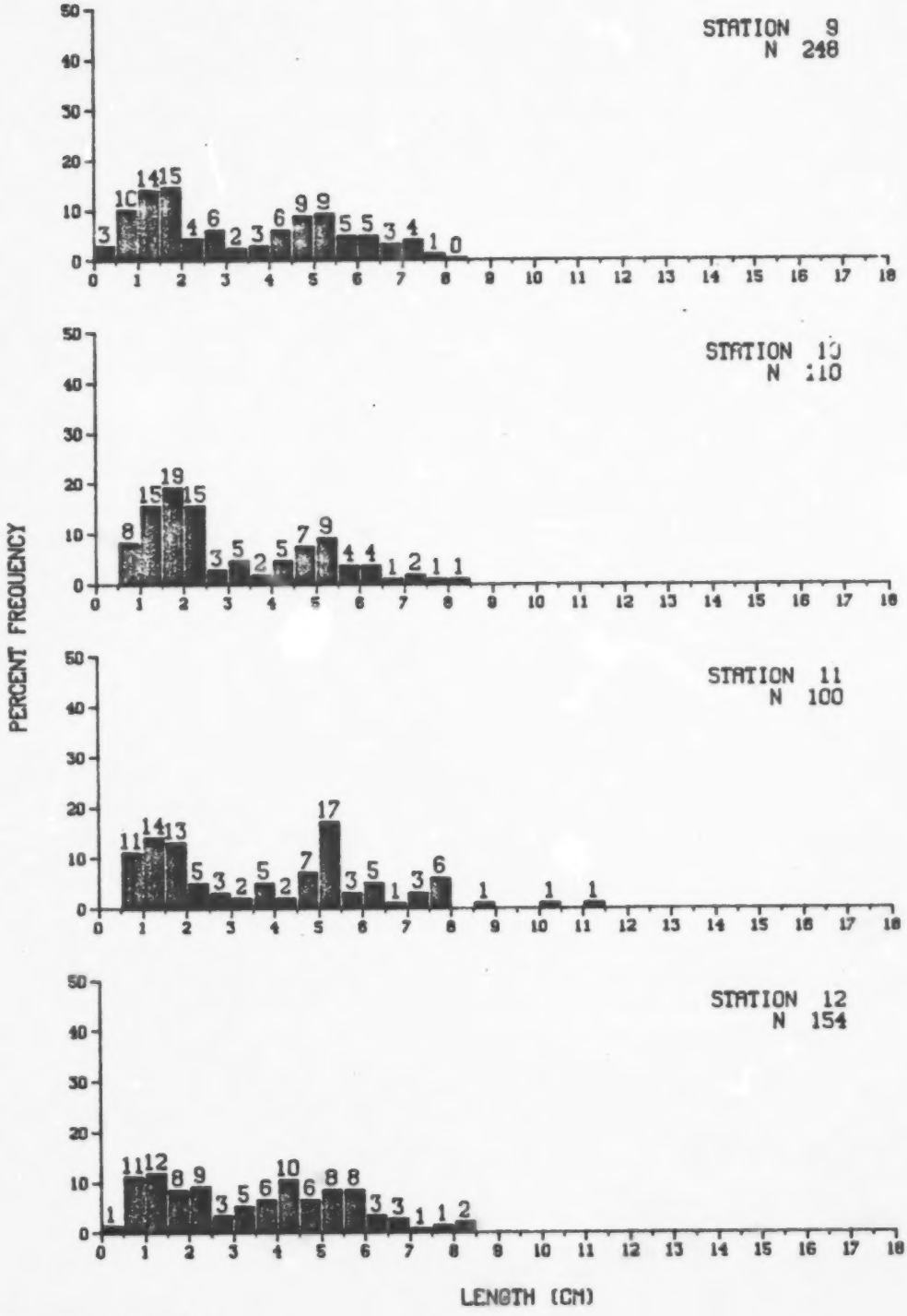

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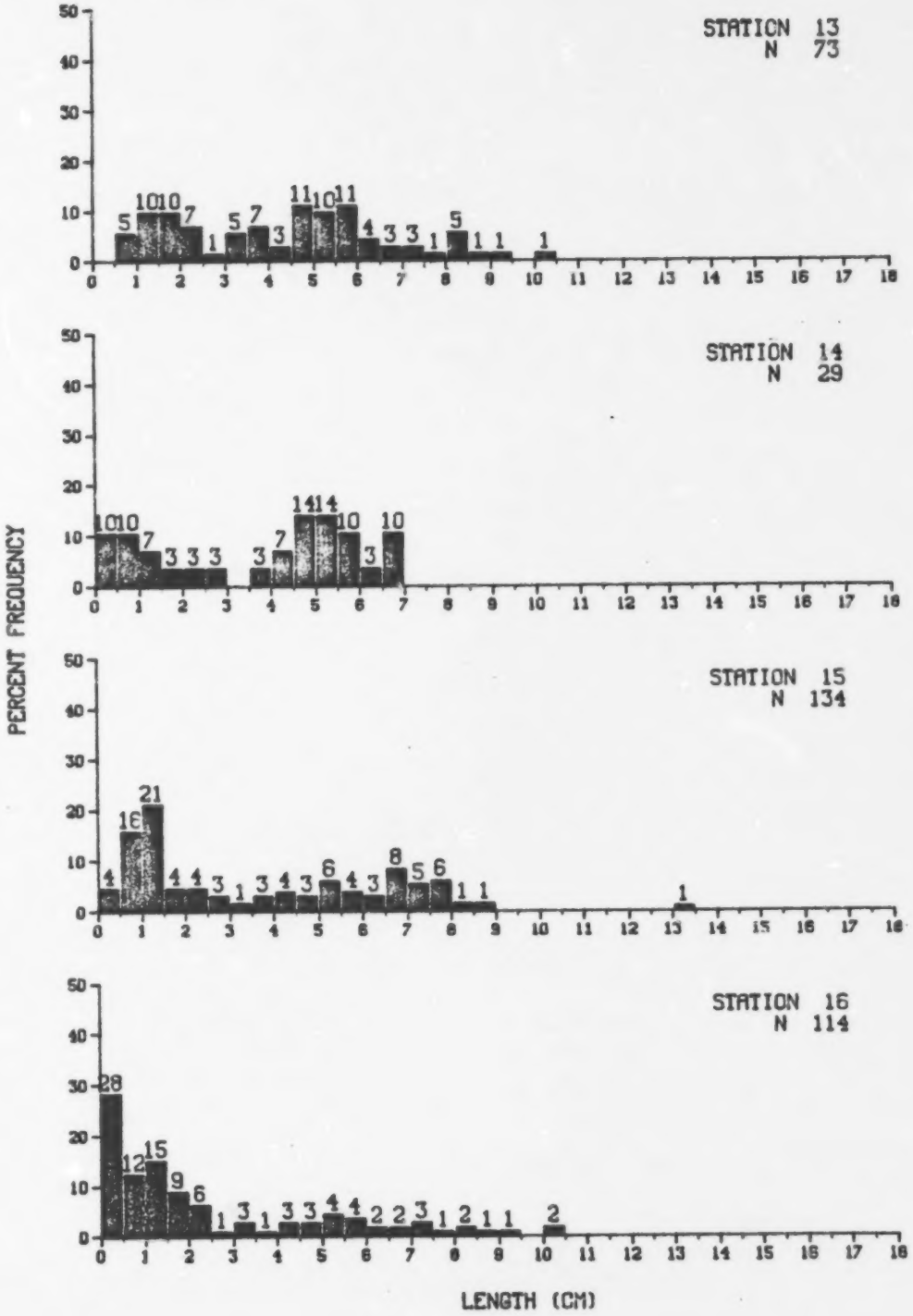

Figure 12. Cont'd.

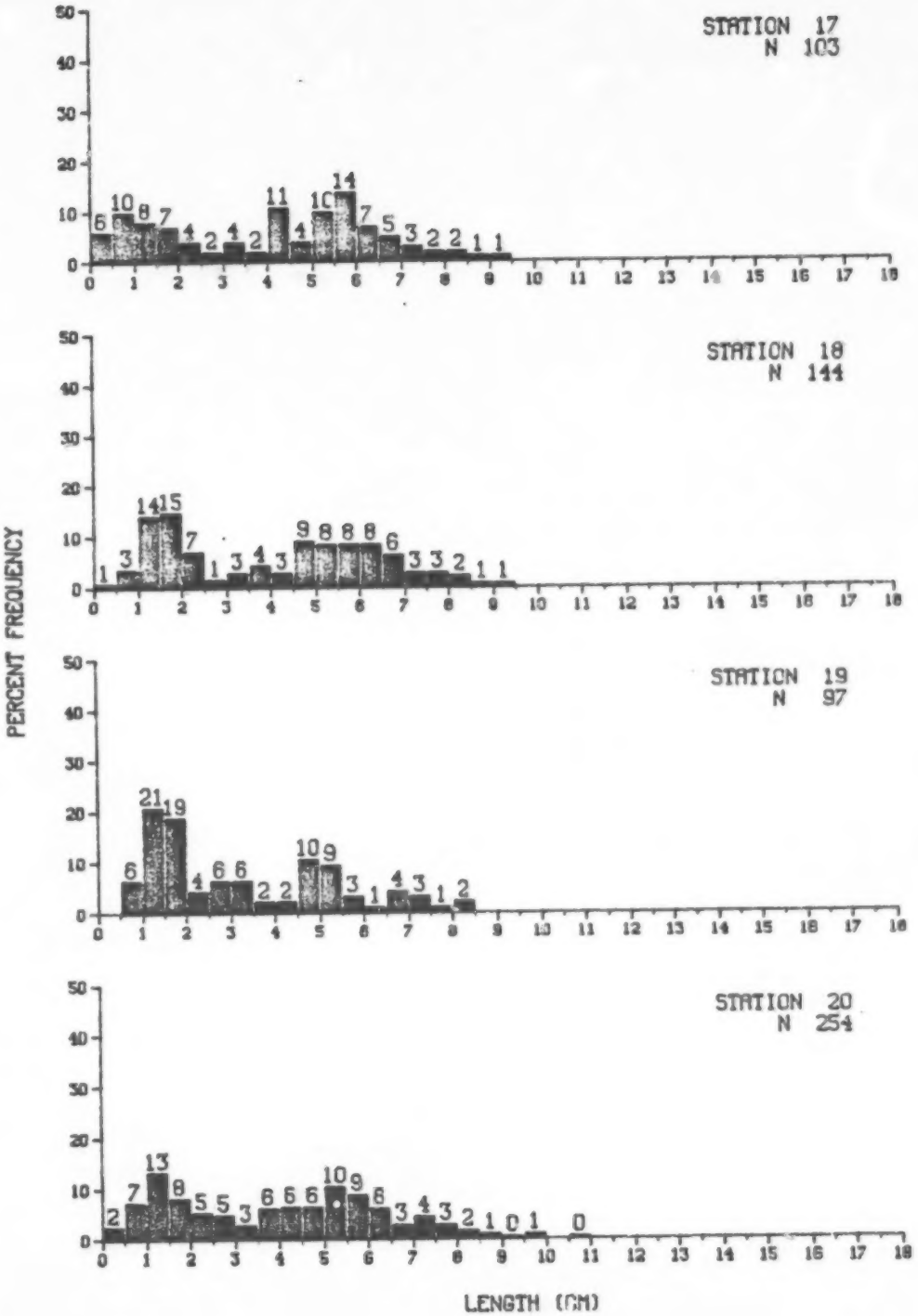

Figure 12. Cont'd.

TOTAL N - 2857.0

SIZE (CM)	FREQ. %	SIZE (CM)	FREQ. %
0.5	2.66	9.5	0.32
1.0	8.75	10.0	0.18
1.5	15.09	10.5	0.35
2.0	11.69	11.0	0.07
2.5	8.72	11.5	0.07
3.0	3.43	12.0	0.00
3.5	3.15	12.5	0.04
4.0	3.85	13.0	0.00
4.5	5.36	13.5	0.04
5.0	7.67	14.0	0.00
5.5	8.79	14.5	0.00
6.0	6.44	15.0	0.00
6.5	5.29	15.5	0.00
7.0	3.96	16.0	0.00
7.5	2.63	16.5	0.00
8.0	1.93	17.0	0.00
8.5	1.09	17.5	0.00
9.0	0.49	18.0	0.00

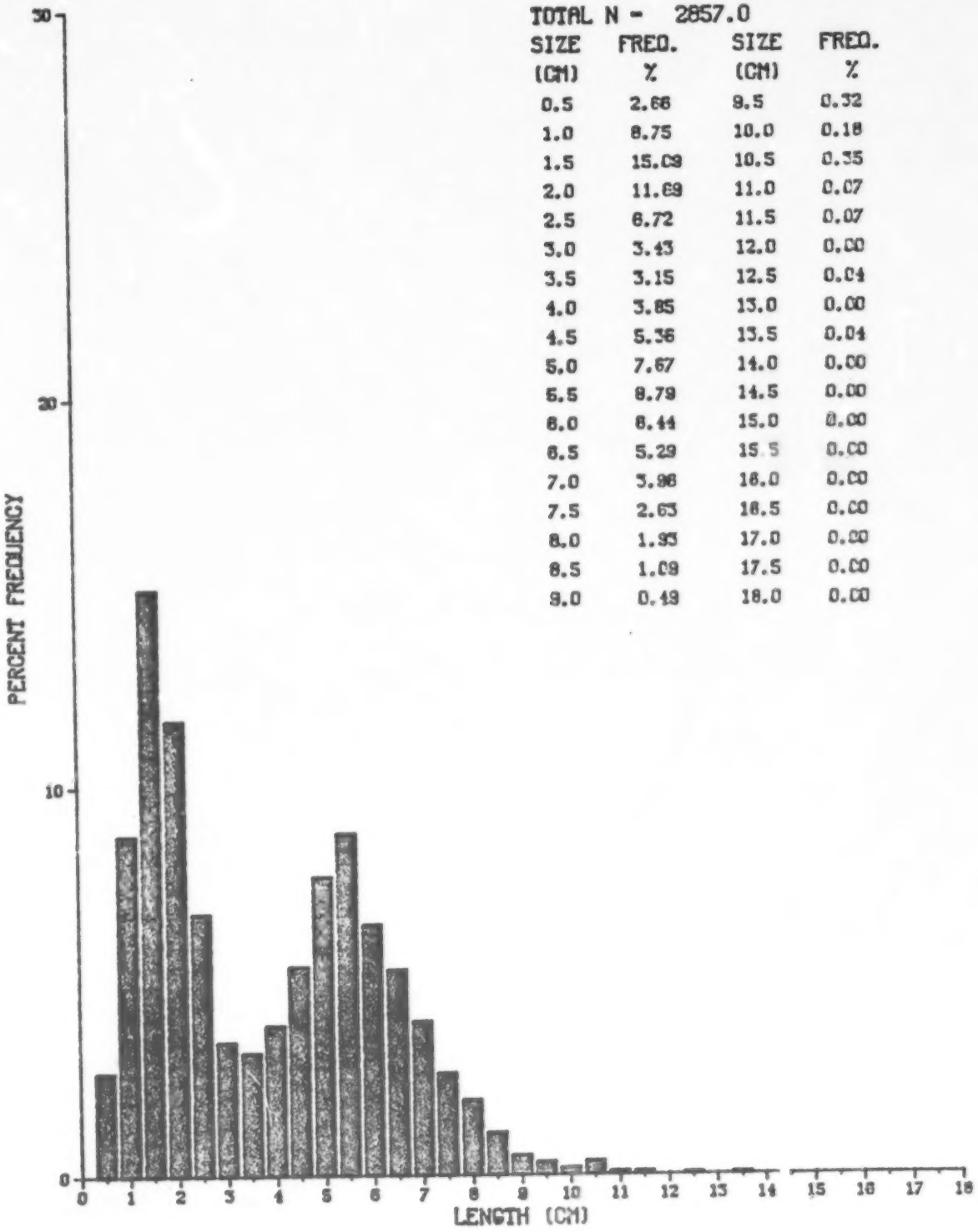

Figure 13. Size frequency distribution of oysters collected over all stations in 1970: 1 yr olds < 2.5 cm in length, 2 yr olds 2.6-4.5 cm, 3 yr olds 4.6-6.5 cm and 4,+ yr olds >6.5 cm.

Appendix. Composition, by weight, of material collected at each station in 1969.

Transect Line: A Station No.: 1

Wet Weight of Shell and Live Invertebrates:	1.29 kg
Wet Weight of Oyster Shell:	0.89 kg
Wet Weight of Other Shell:	0.29 kg
Wet Weight of Oysters:	0.10 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: A Station No.: 2

Wet Weight of Shell and Live Invertebrates:	3.61 kg
Wet Weight of Oyster Shell:	3.15 kg
Wet Weight of Other Shell:	0.21 kg
Wet Weight of Oysters:	0.23 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: A Station No.: 3

Wet Weight of Shell and Live Invertebrates:	0.21 kg
Wet Weight of Oyster Shell:	0.11 kg
Wet Weight of Other Shell:	0.10 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: A Station No.: 4

Wet Weight of Shell and Live Invertebrates:	0.71 kg
Wet Weight of Oyster Shell:	0.71 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: A Station No.: 5

Wet Weight of Shell and Live Invertebrates:	0.39 kg
Wet Weight of Oyster Shell:	0.04 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.15 kg
Wet Weight of Other Invertebrates:	0.21 kg

Transect Line: A Station No.: 6

Wet Weight of Shell and Live Invertebrates:	0.55 kg
Wet Weight of Oyster Shell:	0.07 kg
Wet Weight of Other Shell:	0.48 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: A Station No.: 7 - No catch

Transect Line: A Station No.: 8

Wet Weight of Shell and Live Invertebrates:	2.58 kg
Wet Weight of Oyster Shell:	1.40 kg
Wet Weight of Other Shell:	1.17 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: A Station No.: 18

Wet Weight of Shell and Live Invertebrates:	0.02 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.01 kg

Transect Line: B Station No.: 9 - No catch

Transect Line: B Station No.: 10

Wet Weight of Shell and Live Invertebrates:	0.97 kg
Wet Weight of Oyster Shell:	0.67 kg
Wet Weight of Other Shell:	0.03 kg
Wet Weight of Oysters:	0.27 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: B Station No.: 11

Wet Weight of Shell and Live Invertebrates:	2.08 kg
Wet Weight of Oyster Shell:	1.15 kg
Wet Weight of Other Shell:	0.81 kg
Wet Weight of Oysters:	0.11 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: B Station No.: 12

Wet Weight of Shell and Live Invertebrates:	1.20 kg
Wet Weight of Oyster Shell:	0.92 kg
Wet Weight of Other Shell:	0.02 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.25 kg

...Cont'd.

Appendix . Cont'd.

Transect Line: B Station No.: 13

Wet Weight of Shell and Live Invertebrates:	0.09 kg
Wet Weight of Oyster Shell:	0.05 kg
Wet Weight of Other Shell:	0.04 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: B Station No.: 14

Wet Weight of Shell and Live Invertebrates:	0 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.02 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: B Station No.: 15

Wet Weight of Shell and Live Invertebrates:	0 kg
Wet Weight of Oyster Shell:	0.02 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: B Station No.: 16

Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.01 kg

Transect Line: B Station No.: 17 - No catch

Transect Line: C Station No.: 19

Wet Weight of Shell and Live Invertebrates:	0.17 kg
Wet Weight of Oyster Shell:	0.16 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: C Station No.: 20

Wet Weight of Shell and Live Invertebrates:	2.91 kg
Wet Weight of Oyster Shell:	1.03 kg
Wet Weight of Other Shell:	0.36 kg
Wet Weight of Oysters:	0.69 kg
Wet Weight of Other Invertebrates:	0.81 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: C Station No.: 21

Wet Weight of Shell and Live Invertebrates:	4.24 kg
Wet Weight of Oyster Shell:	2.19 kg
Wet Weight of Other Shell:	0.38 kg
Wet Weight of Oysters:	0.87 kg
Wet Weight of Other Invertebrates:	0.74 kg

Transect Line: C Station No.: 22

Wet Weight of Shell and Live Invertebrates:	2.18 kg
Wet Weight of Oyster Shell:	1.65 kg
Wet Weight of Other Shell:	0.24 kg
Wet Weight of Oysters:	0.00 kg
Wet Weight of Other Invertebrates:	0.18 kg

Transect Line: C Station No.: 23

Wet Weight of Shell and Live Invertebrates:	0.30 kg
Wet Weight of Oyster Shell:	0.10 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.20 kg

Transect Line: C Station No.: 24

Wet Weight of Shell and Live Invertebrates:	0.12 kg
Wet Weight of Oyster Shell:	0.10 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: C Station No.: 25

Wet Weight of Shell and Live Invertebrates:	0.19 kg
Wet Weight of Oyster Shell:	0.19 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: C Station No.: 26 - No catch

... Cont'd.

Appendix. Cont'd.

Transect Line: C Station No.: 27

Wet Weight of Shell and Live Invertebrates:	0.76 kg
Wet Weight of Oyster Shell:	0.42 kg
Wet Weight of Other Shell:	0.16 kg
Wet Weight of Oysters:	0.18 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: C Station No.: 28

Wet Weight of Shell and Live Invertebrates:	0 kg
Wet Weight of Oyster Shell:	0.02 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: D Station No.: 29

Wet Weight of Shell and Live Invertebrates:	0.02 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.01 kg

Transect Line: D Station No.: 30

Wet Weight of Shell and Live Invertebrates:	0.19 kg
Wet Weight of Oyster Shell:	0.15 kg
Wet Weight of Other Shell:	0.04 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: D Station No.: 31

Wet Weight of Shell and Live Invertebrates:	0.29 kg
Wet Weight of Oyster Shell:	0.29 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.02 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: D Station No.: 32

Wet Weight of Shell and Live Invertebrates:	0.60 kg
Wet Weight of Oyster Shell:	0.28 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0.30 kg
Wet Weight of Other Invertebrates:	0.01 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: D Station No.: 33

Wet Weight of Shell and Live Invertebrates:	5.51 kg
Wet Weight of Oyster Shell:	4.16 kg
Wet Weight of Other Shell:	0.65 kg
Wet Weight of Oysters:	0.64 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: D Station No.: 34

Wet Weight of Shell and Live Invertebrates:	5.43 kg
Wet Weight of Oyster Shell:	3.37 kg
Wet Weight of Other Shell:	1.30 kg
Wet Weight of Oysters:	0.39 kg
Wet Weight of Invertebrates:	0.33 kg

Transect Line: D Station No.: 35

Wet Weight of Shell and Live Invertebrates:	1.48 kg
Wet Weight of Oyster Shell:	0.98 kg
Wet Weight of Other Shell:	0.20 kg
Wet Weight of Oysters:	0.18 kg
Wet Weight of Other Invertebrates:	0.11 kg

Transect Line: D Station No.: 36

Wet Weight of Shell and Live Invertebrates:	6.73 kg
Wet Weight of Oyster Shell:	4.41 kg
Wet Weight of Other Shell:	0.94 kg
Wet Weight of Oysters:	1.67 kg
Wet Weight of Other Invertebrates:	0.44 kg

Transect Line: D Station No.: 37

Wet Weight of Shell and Live Invertebrates:	0.14 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.14 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: D Station No.: 38

Wet Weight of Shell and Live Invertebrates:	1.09 kg
Wet Weight of Oyster Shell:	1.10 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.02 kg
Wet Weight of Other Invertebrates:	0 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: D Station No.: 39

Wet Weight of Shell and Live Invertebrates:	0.46 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.20 kg
Wet Weight of Oysters:	0.25 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: D Station No.: 40

Wet Weight of Shell and Live Invertebrates:	1.02 kg
Wet Weight of Oyster Shell:	0.36 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.63 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: D Station No.: 41 - No catch

Transect Line: E Station No.: 42

Wet Weight of Shell and Live Invertebrates:	0.96 kg
Wet Weight of Oyster Shell:	0.21 kg
Wet Weight of Other Shell:	0.19 kg
Wet Weight of Oysters:	0.47 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: E Station No.: 43

Wet Weight of Shell and Live Invertebrates:	3.16 kg
Wet Weight of Oyster Shell:	0.87 kg
Wet Weight of Other Shell:	0.09 kg
Wet Weight of oysters:	1.83 kg
Wet Weight of Other Invertebrates:	0.31 kg

Transect Line: E Station No.: 44 - No catch

Transect Line: E Station No.: 45

Wet Weight of Shell and Live Invertebrates:	2.75 kg
Wet Weight of Oyster Shell:	1.67 kg
Wet Weight of Other Shell:	0.06 kg
Wet Weight of Oysters:	0.67 kg
Wet Weight of Other Invertebrates:	0.27 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: E Station No.: 46

Wet Weight of Shell and Live Invertebrates: . . . . . 5.17 kg
Wet Weight of Oyster Shell: . . . . . 2.64 kg
Wet Weight of Other Shell: . . . . . 0.28 kg
Wet Weight of Oysters: . . . . . 0.57 kg
Wet Weight of Other Invertebrates: . . . . . 0.15 kg

Transect Line: E Station No.: 47

Wet Weight of Shell and Live Invertebrates: . . . . . 5.42 kg
Wet Weight of Oyster Shell: . . . . . 2.52 kg
Wet Weight of Other Shell: . . . . . 0.55 kg
Wet Weight of Oysters: . . . . . 1.67 kg
Wet Weight of Other Invertebrates: . . . . . 0.45 kg

Transect Line: E Station No.: 48

Wet Weight of Shell and Live Invertebrates: . . . . . 4.40 Kg
Wet Weight of Oyster Shell: . . . . . 2.76 kg
Wet Weight of Other Shell: . . . . . 0.19 kg
Wet Weight of Oysters: . . . . . 1.42 kg
Wet Weight of Other Invertebrates: . . . . . 0 kg

Transect Line: E Station No.: 49

Wet Weight of Shell and Live Invertebrates: . . . . . 3.32 kg
Wet Weight of Oyster Shell: . . . . . 2.58 kg
Wet Weight of Other Shell: . . . . . 0.15 kg
Wet Weight of Oysters: . . . . . 0.48 kg
Wet Weight of Other Invertebrates: . . . . . 0 kg

Transect Line: E Station No.: 50

Wet Weight of Shell and Live Invertebrates: . . . . . 2.66 kg
Wet Weight of Oyster Shell: . . . . . 2.05 kg
Wet Weight of Other Shell: . . . . . 0.06 kg
Wet Weight of Oysters: . . . . . 0.51 kg
Wet Weight of Other Invertebrates: . . . . . 0 kg

Transect Line: E Station No.: 51

Wet Weight of Shell and Live Invertebrates: . . . . . 0.48 kg
Wet Weight of Oyster Shell: . . . . . 0.34 kg
Wet Weight of Other Shell: . . . . . 0.24 kg
Wet Weight of Oysters: . . . . . 0.09 kg
Wet Weight of Other Invertebrates: . . . . . 0 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: E Station No.: 52 - No catch

Transect Line: E Station No.: 53 - No catch

Transect Line: F Station No.: 54

Wet Weight of Shell and Live Invertebrates:	0.54 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.15 kg
Wet Weight of Oysters:	0.02 kg
Wet Weight of Other Invertebrates:	0.38 kg

Transect Line: F Station No.: 55

Wet Weight of Shell and Live Invertebrates:	0.06 kg
Wet Weight of Oyster Shell:	0.04 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0.01 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: F Station No.: 56

Wet Weight of Shell and Live Invertebrates:	0.34 kg
Wet Weight of Oyster Shell:	0.12 kg
Wet Weight of Other Shell:	0.04 kg
Wet Weight of Oysters:	0.01 kg
Wet Weight of Other Invertebrates:	0.16 kg

Transect Line: F Station No.: 57

Wet Weight of Shell and Live Invertebrates:	2.92 kg
Wet Weight of Oyster Shell:	1.79 kg
Wet Weight of Other Shell:	0.15 kg
Wet Weight of Oysters:	0.75 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: F Station No.: 58

Wet Weight of Shell and Live Invertebrates:	1.03 kg
Wet Weight of Oyster Shell:	0.54 kg
Wet Weight of Other Shell:	0.14 kg
Wet Weight of Oysters:	0.22 kg
Wet Weight of Other Invertebrates:	0 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: F Station No.: 59

Wet Weight of Shell and Live Invertebrates:	1.86 kg
Wet Weight of Oyster Shell:	1.20 kg
Wet Weight of Other Shell:	0.16 kg
Wet Weight of Oysters:	0.39 kg
Wet Weight of Other Invertebrates:	0.07 kg

Transect Line: F Station No.: 60

Wet Weight of Shell and Live Invertebrates:	1.14 kg
Wet Weight of Oyster Shell:	0.93 kg
Wet Weight of Other Shell:	0.02 kg
Wet Weight of Oysters:	0.10 kg
Wet Weight of Other Invertebrates:	0.06 kg

Transect Line: F Station No.: 61

Wet Weight of Shell and Live Invertebrates:	1.07 kg
Wet Weight of Oyster Shell:	0.74 kg
Wet Weight of Other Shell:	0.05 kg
Wet Weight of Oysters:	0.25 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: F Station No.: 62

Wet Weight of Shell and Live Invertebrates:	1.74 kg
Wet Weight of Oyster Shell:	1.18 kg
Wet Weight of Other Shell:	0.08 kg
Wet Weight of Oysters:	0.35 kg
Wet Weight of Other Invertebrates:	0.06 kg

Transect Line: F Station No.: 63

Wet Weight of Shell and Live Invertebrates:	0.15 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.15 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: F Station No.: 64

Wet Weight of Shell and Live Invertebrates:	0.38 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.07 kg
Wet Weight of Oysters:	0.04 kg
Wet Weight of Other Invertebrates:	0.17 kg

.../Cont'd.

Appendix. Cont'd.

Transect Line: G Station No.: 65

Wet Weight of Shell and Live Invertebrates:	0.25 kg
Wet Weight of Oyster Shell:	0.01 kg
Wet Weight of Other Shell:	0.07 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.17 kg

Transect Line: G Station No.: 66

Wet Weight of Shell and Live Invertebrates:	5.18 kg
Wet Weight of Oyster Shell:	0.58 kg
Wet Weight of Other Shell:	1.31 kg
Wet Weight of Oysters:	0.78 kg
Wet Weight of Other Invertebrates:	2.10 kg

Transect Line: G Station No.: 67

Wet Weight of Shell and Live Invertebrates:	0.93 kg
Wet Weight of Oyster Shell:	0.16 kg
Wet Weight of Other Shell:	0.04 kg
Wet Weight of Oysters:	0.30 kg
Wet Weight of Other Invertebrates:	0.33 kg

Transect Line: G Station No.: 68

Wet Weight of Shell and Live Invertebrates:	2.05 kg
Wet Weight of Oyster Shell:	0.94 kg
Wet Weight of Other Shell:	0.08 kg
Wet Weight of Oysters:	0.77 kg
Wet Weight of Other Invertebrates:	0.23 kg

Transect Line: G Station No.: 69

Wet Weight of Shell and Live Invertebrates:	1.18 kg
Wet Weight of Oyster Shell:	0.28 kg
Wet Weight of Other Shell:	0.16 kg
Wet Weight of Oysters:	0.08 kg
Wet Weight of Invertebrates:	0.65 kg

Transect Line: G Station.: 70

Wet Weight of Shell and Live Invertebrates:	3.52 kg
Wet Weight of Oyster Shell:	0.53 kg
Wet Weight of Other Shell:	0.44 kg
Wet Weight of Oysters:	0.58 kg
Wet Weight of Other Invertebrates:	0.70 kg.

...Cont'd.

Appendix. Cont'd.

Transect Line: G Station No.: 71

Wet Weight of Shell and Live Invertebrates: . . . . . 9.29 kg
Wet Weight of Oyster Shell: . . . . . 3.11 kg
Wet Weight of Other Shell: . . . . . 0.75 kg
Wet Weight of Oysters: . . . . . 1.93 kg
Wet Weight of Other Invertebrates: . . . . . 3.23 kg

Transect Line: G Station No.: 72

Wet Weight of Shell and Live Invertebrates: . . . . . 5.22 kg
Wet Weight of Oyster Shell: . . . . . 0.61 kg
Wet Weight of Other Shell: . . . . . 0.59 kg
Wet Weight of Oysters: . . . . . 0.96 kg
Wet Weight of Other Invertebrates: . . . . . 2.96 kg

Transect Line: H Station No.: 73

Wet Weight of Shell and Live Invertebrates: . . . . . 0.04 kg
Wet Weight of Oyster Shell: . . . . . 0 kg
Wet Weight of Other Shell: . . . . . 0.02 kg
Wet Weight of Oysters: . . . . . 0.02 kg
Wet Weight of Other Invertebrates: . . . . . 0 kg

Transect Line: H Station No.: 74

Wet Weight of Shell and Live Invertebrates: . . . . . 6.88 kg
Wet Weight of Oyster Shell: . . . . . 3.69 kg
Wet Weight of Other Shell: . . . . . 1.28 kg
Wet Weight of Oysters: . . . . . 0.25 kg
Wet Weight of Other Invertebrates: . . . . . 2.11 kg

Transect Line: H Station No.: 75

Wet Weight of Shell and Live Invertebrates: . . . . . 2.17 kg
Wet Weight of Oyster Shell: . . . . . 0.80 kg
Wet Weight of Other Shell: . . . . . 0.22 kg
Wet Weight of Oysters: . . . . . 0.36 kg
Wet Weight of Other Invertebrates: . . . . . 0.69 kg

Transect Line: H Station No.: 76

Wet Weight of Shell and Live Invertebrates: . . . . . 4.92 kg
Wet Weight of Oyster Shell: . . . . . 2.07 kg
Wet Weight of Other Shell: . . . . . 0.23 kg
Wet Weight of Oysters: . . . . . 1.36 kg
Wet Weight of Other Invertebrates: . . . . . 1.23 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: H Station No.: 77

Wet Weight of Shell and Live Invertebrates:	0.06 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.04 kg

Transect Line: H Station No.: 78

Wet Weight of Shell and Live Invertebrates:	0.02 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.02 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: I Station No.: 79

Wet Weight of Shell and Live Invertebrates:	0.21 kg
Wet Weight of Oyster Shell:	0.06 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.05 kg
Wet Weight of Other Invertebrates:	0.09 kg

Transect Line: I Station No.: 80

Wet Weight of Shell and Live Invertebrates:	0.20 kg
Wet Weight of Oyster Shell:	0.11 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.04 kg
Wet Weight of Other Invertebrates:	0.04 kg

Transect Line: I Station No.: 81 - No catch

Transect Line: I Station No.: 82 - No catch

Transect Line: I Station No.: 83

Wet Weight of Shell and Live Invertebrates:	6.59 kg
Wet Weight of Oyster Shell:	5.85 kg
Wet Weight of Other Shell:	0.16 kg
Wet Weight of Oysters:	0.28 kg
Wet Weight of Other Invertebrates:	0.16 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: I Station No.: 84

Wet Weight of Shell and Live Invertebrates:	0.29 kg
Wet Weight of Oyster Shell:	0.01 kg
Wet Weight of Other Shell:	0.06 kg
Wet Weight of Oysters:	0.22 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: I Station No.: 85

Wet Weight of Shell and Live Invertebrates:	0.22 kg
Wet Weight of Oyster Shell:	0.02 kg
Wet Weight of Other Shell:	0.10 kg
Wet Weight of Oysters:	0.01 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: I Station No.: 86 - No catch

Transect Line: J Station No.: 87

Wet Weight of Shell and Live Invertebrates:	0.10 kg
Wet Weight of Oyster Shell:	0.06 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0.04 kg

Transect Line: J Station No.: 88 - No catch

Transect Line: J Station No.: 89 - No catch

Transect Line: J Station No.: 90

Wet Weight of Shell and Live Invertebrates:	0.47 kg
Wet Weight of Oyster Shell:	0.18 kg
Wet Weight of Other Shell:	0.07 kg
Wet Weight of Oysters:	0.12 kg
Wet Weight of Other Invertebrates:	0.09 kg

Transect Line: J Station No.: 91

Wet Weight of Shell and Live Invertebrates:	0.11 kg
Wet Weight of Oyster Shell:	0.02 kg
Wet Weight of Other Shell:	0.01 kg
Wet Weight of Oysters:	0.01 kg
Wet Weight of Other Invertebrates:	0.06 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: J Station No.: 92

Wet Weight of Shell and Live Invertebrates:	0.20	kg
Wet Weight of Oyster Shell:	0	kg
Wet Weight of Other Shell:	0	kg
Wet Weight of Oysters:	0	kg
Wet Weight of Other Invertebrates:	0	kg

Transect Line: I Station No.: 93

Wet Weight of Shell and Live Invertebrates:	0.85	kg
Wet Weight of Oyster Shell:	0.09	kg
Wet Weight of Other Shell:	0.02	kg
Wet Weight of Oysters:	0.62	kg
Wet Weight of Other Invertebrates:	0.12	kg

Transect Line: J Station No.: 94 - No catch

Transect Line: J Station No.: 95

Wet Weight of Shell and Live Invertebrates:	0.72	kg
Wet Weight of Oyster Shell:	0.15	kg
Wet Weight of Other Shell:	0.06	kg
Wet Weight of Oysters:	0.16	kg
Wet Weight of Other Invertebrates:	0.34	kg

Transect Line: J Station No.: 96

Wet Weight of Shell and Live Invertebrates:	0.32	kg
Wet Weight of Oyster Shell:	0.21	kg
Wet Weight of Other Shell:	0.04	kg
Wet Weight of Oysters:	0.06	kg
Wet Weight of Other Invertebrates:	0	kg

Transect Line: J Station No.: 97

Wet Weight of Shell and Live Invertebrates:	1.33	kg
Wet Weight of Oyster Shell:	0.44	kg
Wet Weight of Other Shell:	0.18	kg
Wet Weight of Oysters:	0.51	kg
Wet Weight of Other Invertebrates:	0.18	kg

...Cont'd.

Appendix. Cont'd.

Transect Line: J Station No.: 98

Wet Weight of Shell and Live Invertebrates:	4.82 kg
Wet Weight of Oyster Shell:	2.14 kg
Wet Weight of Other Shell:	0.18 kg
Wet Weight of Oysters:	1.77 kg
Wet Weight of Other Invertebrates:	0.58 kg

Transect Line: L Station No.: 99

Wet Weight of Shell and Live Invertebrates:	3.31 kg
Wet Weight of Oyster Shell:	0.97 kg
Wet Weight of Other Shell:	0.27 kg
Wet Weight of Oysters:	1.81 kg
Wet Weight of Other Invertebrates:	0.15 kg

Transect Line: M Station No.: 100

Wet Weight of Shell and Live Invertebrates:	0.01 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: M Station No.: 101 - No catch

Transect Line: M Station No.: 102 - No catch

Transect Line: M Station No.: 103 - No catch

Transect Line: N Station No.: 104 - No catch

Transect Line: N Station No.: 105

Wet Weight of Shell and Live Invertebrates:	0.48 kg
Wet Weight of Oyster Shell:	0.30 kg
Wet Weight of Other Shell:	0 kg
Wet Weight of Oysters:	0.17 kg
Wet Weight of Other Invertebrates:	0 kg

...Cont'd.

Appendix. Cont'd.

Transect Line: N Station No.: 106

Wet Weight of Shell and Live Invertebrates:	14.06 kg
Wet Weight of Oyster Shell:	1.66 kg
Wet Weight of Other Shell:	8.23 kg
Wet Weight of Oysters:	1.27 kg
Wet Weight of Other Invertebrates:	2.63 kg

Transect Line: N Station No.: 107

Wet Weight of Shell and Live Invertebrates:	4.68 kg
Wet Weight of Oyster Shell:	1.76 kg
Wet Weight of Other Shell:	0.47 kg
Wet Weight of Oysters:	1.12 kg
Wet Weight of Other Invertebrates:	1.28 kg

Transect Line: N Station No.: 108

Wet Weight of Shell and Live Invertebrates:	0.30 kg
Wet Weight of Oyster Shell:	0 kg
Wet Weight of Other Shell:	0.30 kg
Wet Weight of Oysters:	0 kg
Wet Weight of Other Invertebrates:	0 kg

Transect Line: N Station No.: 109 - No catch

Transect Line: N Station No.: 110 - No catch